

INSIDE DOPE

by GEORGE F. TAUBENECK

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Good Reading

Story of the Week

Like plumbers, accountants, morticians, engineers, and appliance dealers, preachers get together at annual conventions, too. By happenstance, a subscriber found himself amidst a convention of ministers at the Peabody hotel in Nashville, Tennessee. At this conclave he heard the following yarn at least 16 times.

"One of you gennemun is playin' aroun' wid somebody else's wife," solemnly announced a village parson. "An' lessen this heah gennemun repents an' draps a dolluh bill into the collection plate, Ah'll mention his name right heah and naow."

Nobody in the congregation had contributed paper money before. But this time nine dollar-bills were deposited, along with a scrawled scrap-paper chit which read:

"Givin' 30 cents now. Givin' the rest next payday."

Russian Anecdote

"Russia," cried the Soviet agricultural expert at a Paris meeting, "is an agricultural paradise, with four wheat crops a year."

Incredulous listeners demanded details.

"It's easy," he explained. "We have one from Poland, one from Hungary, one from Czechoslovakia and one from Russia."—*N. Y. Times Magazine*.

Gags of the Week

"I never cooked anything and I don't intend to until after the wedding," said a local bride, stringing along with the old gag.—*H. V. WADE in The Detroit News*.

"It's a good thing to get in and dig, but be careful which way you throw the dirt."—*Consolidated Mining Co. house organ*.

Slow Boat from Galapagos

Kramer Trenton Co.
Trenton, N. J.

Editor:

I am enclosing a photostatic copy of a letter and envelope which I received recently from R. Ernest Nitzsche. Two years ago Mr. Nitzsche, then vice president of Hill York Co. of Miami, Fla., flew in to the Trenton Airport by private plane to have us quote an air conditioning job for a large hotel in Miami. He was in a great hurry and flew right back to Miami. Unfortunately we did not get the contract, and we forgot all about it.

As you will note, the letter enclosed was posted "Galapagos Island" and was written in longhand by Mr. Nitzsche acknowledging our kindness in meeting him at the airport and regretting not being able to award us the contract. I had asked everybody around the place whether we had any pending quotations with Hill York Co. and the answer was negative, so that this letter became more and more puzzling. Finally I discovered in the upper right hand corner that the letter was dated Aug. 30, 1949. The contents of the letter should by now be self-explanatory. I do hope you will get as much of a laugh out of this as all of us here at Trenton did.

ISRAEL KRAMER

Dear Israel:

In my rush to get away from the office for a few months in the Galapagos I forgot to acknowledge your kindness in meeting us as you did. Anyway—better late than never—so thanks a lot—and I am sorry the order didn't go your way.

Sincerely,
REN

P.S. This note will be posted in a barrel at P. O. Bay on Horeana Island—it will be picked up by a

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NPA Issues Orders To Assure Consumer Durable Goods Output

Sets Aside 30-46% of Steel; Small Users Issue Own Priority

WASHINGTON, D. C.—Though in effect only three weeks now, the Controlled Materials Plan has already reached out to touch nearly every element in the refrigeration, air conditioning, and electrical appliance industries.

Here is a summary of recent actions taken by the Defense Production Administration and the National Production Authority that brings CMP right into everybody's business:

1. The DPA instructed steel manufacturers to set aside for sale in the free market during the third quarter from 30 to 46% of their total production of the types of steel needed by the consumer durable goods industry.

It told them to refuse to handle CMP rated orders that exceed 70% of their production of hot rolled sheets and strips, 60% of cold rolled strip, and 54% of cold rolled sheets.

Actually, DPA indicated, there may be even more than this available to the free market. Any amounts not used during the third quarter by companies receiving allotments under CMP will be turned into the free market, too.

2. NPA announced that manufacturers of consumer durable goods are to file applications for allotments of controlled materials for use in the fourth quarter and their anticipated needs for the first three quarters of 1952. Whether or not these industries will be brought under the CMP then is still undecided.

3. NPA gave small manufacturers of appliances the right to use a "SU"

(small user) allotment symbol on their delivery orders for steel, copper, and aluminum and a DO-SU symbol on orders for other production materials to go along with the CMP metals.

They can issue their own priority orders without asking NPA provided they do not use more than 5 tons of carbon steel, ½-ton of alloy steel except stainless, 500 lbs. of copper, and 500 lbs. of aluminum during the third quarter.

Provided they use no stainless steel, firms using more than these prescribed amounts of metal are required to seek all their needs in the free market.

The SU priority, however does not authorize them to use more of the controlled materials than they are permitted to use under NPA regulation M-47A.

4. NPA revoked its Regulation 4 giving all businesses the right to use a DO-97 rating to get maintenance, repair, and operating supplies and minor capital additions and replaced it with CMP Regulations 5 and 7.

CMP Regulation 5 is almost identical with the former Regulation 4 except that it changes the priority symbol from DO-97 to MRO for obtaining steel, copper, and aluminum items and DO-MRO for getting other materials.

CMP Regulation 7 gives repair shops (including appliance and refrigeration repair) the right to use the customer's MRO allotment priority to get the materials needed to make the

(Concluded on Page 25, Column 2)

Fair Traders' Gains Small In Price Fight

NEW YORK CITY—Backers of "Fair Trade" pricing policies have put forth a lot of effort since the Supreme Court, on May 21, ruled a non-signer is not bound by "Fair Trade" contracts, but thus far they haven't been able to report much progress.

A few manufacturers have refused to sell retailers who have been found cutting prices, but they are a very small minority. It is said that Macy's department store in New York City has cut prices on 5,978 "Fair Trade" items, but that less than a dozen manufacturers have refused to sell to Macy as a result.

One liquor distilling company is said to be establishing its own wholesalers in each state, to put sales to retailers in intrastate commerce—thus to circumvent the Supreme Court ruling which covered only interstate trade.

Michigan Court Upholds Non-Signer's Exemption

DETROIT—Michigan retailers who have not signed written contracts with manufacturers in the state are not obligated to observe the latter's fair trade prices under a ruling issued here by Circuit Judge George B. Murphy.

Judge Murphy held that sections of the Michigan Fair Trade Law are unconstitutional.

The ruling was made in a case filed by the Shakespeare Co. of Kalamazoo against Lippman's Tool Shop Sporting Goods Co. of Detroit.

The store claimed the merchandise it sold at cut prices had not been purchased directly from Shakespeare but from out-of-state sources.

Most Prices Frozen At June 30 Level

WASHINGTON, D. C.—Manufacturers' prices controlled by six OPS orders have been frozen at the June 30 level by General Overriding Regulation 13 (GOR 13) issued by OPS.

GOR 13 and Interpretation 1 to the order make it clear that in order for any manufacturer to have his applicable producer order in effect now, he must prove that he took some positive action, such as a sale, written offer, contract, or delivery at prices under his manufacturer's order.

Thus, if a manufacturer had established the right to put his prices

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Hayes To Head Lehigh Condensing Unit Div.

EASTON, Pa.—Frank E. Shumann, president of Lehigh Foundries, Inc. and Lehigh Mfg. Co., has announced that rapidly expanding civilian and military demands for products made by Lehigh's combined industries have brought about major headquarter changes in key personnel.



Ralph Hayes

Hayes, who has been associated with Lehigh Foundries, Inc. in Easton, as manager of the Ordnance Division, will assume the general management, in Lancaster, of Lehigh Mfg. Co., which produces Lehigh open type and hermetic refrigeration condensing units.

Hayes, who is an engineer with

(Concluded on Page 4, Column 1)

Frigidaire Adds 2 Refrigerators and Electric Range

DAYTON—Two new household refrigerators and a new electric range have been added to the home appliance lines of Frigidaire division of General Motors Corp., H. M. Kelley, appliance sales manager, announced recently.

One of the new refrigerators is a porcelain-finished Master model (MO-81P) that features a porcelain-on-steel exterior as well as an acid-resisting porcelain interior.

It has a capacity of 8.1 cu. ft. and will store up to 41 lbs. of frozen food in the full-width Super-Freezer chest. Eight pounds of ice can be frozen in the Quickcube trays.

Other features are: Frigidaire Meter-Miser, a full-width plastic Chill Drawer, adjustable shelves, and two "stack-up" Hydrators for fruits and

(Concluded on Page 4, Column 5)

Gov't Proposed Ban On New Natural Gas Use Hit by Industry

NEW YORK CITY—Trade association opposition mounted last week to a proposal by the Petroleum Administration for Defense that would prohibit suppliers of natural gas from serving new space-heating customers or new industrial users after a given date without the approval of the government agency.

A tentative order to this effect has been drafted by PAD. Bruce K. Brown, Deputy Petroleum Administrator, explained that regulation of the use of natural gas "seems necessary" because defense needs for steel have prevented completion of essential pipelines and the nation now faces a very tight situation in supplies of that fuel.

"Unless something is done promptly," Brown said, "a serious gas shortage will develop."

(Concluded on Page 4, Column 2)

FRB Refuses To Relax Credit Curbs; Congress Must Take the Action

WASHINGTON, D. C.—If there is going to be any relaxation of consumer credit controls, it will have to come by action of Congress.

The Federal Reserve Board, in a six-page letter to congressional banking committee chairmen last week, stated that it could not "justify" relaxing consumer credit controls on appliances and other consumer durable goods at this time.

(Concluded on Page 4, Column 3)

McCarthy Named Gen. Mgr., Sears Becomes Sales Mgr. Of Lynch Ohio Divisions

TOLEDO—Reorganization of the Ohio divisions of Lynch Corp. and appointment of Joseph P. McCarthy as general manager and R. L. Sears as sales manager of the divisions have been announced by Frank K. Zimmerman, president of the corporation.

McCarthy has been associated with Lynch since 1938 as a manufacturing executive.

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Business Places, Repairmen Get CMP Allotment

MRO, RE Symbols Replace DO-97 Rating for Repair, Maintenance Supplies

WASHINGTON, D. C.—The National Production Authority has revoked its Regulation 4 which gave all business enterprises, government agencies, and public or private institutions the right to use DO-97 priority ratings to obtain needed maintenance, repair, and operating supplies, and to make minor capital additions.

In its place it has substituted Regulation 5 and 7 to the Controlled Materials Plan.

The change-over became effective on July 6.

Orders bearing the DO-97 rating placed before that date for delivery during the third quarter will have preferential status with CMP allotments and DO rated orders identified by an allotment order or symbol. Those placed after that date will not have such preference.

A producer of an A or B product under CMP, who before July 6 extended a DO-97 order to a supplier of steel, copper, or aluminum, and who has received an authorized production schedule with a related allotment, shall charge against that allotment the amount of any controlled material he receives for filling this order.

If the DO-97 order calls for delivery after the third quarter, it must be converted into an authorized controlled material order or into a rated order with the allotment symbol MRO before Aug. 15 or it will lose its rating.

CMP Regulation 5 is essentially the same as NPA Regulation 4. In place of the DO-97 order, it empowers business enterprises and the others to use a MRO allotment symbol to get needed steel, copper, and aluminum supplies and a DO-MRO rating to get supplies using non-controlled materials.

These symbols cannot be used to get materials for personal or household use, however.

CMP Regulation 7 gives repair shops, such as domestic appliance repair, refrigeration service organizations, and reconditioning and rebuilding shops, the right to use the MRO and DO-MRO ratings of its customers to get the needed materials for repair work.

(Concluded on Back Page, Column 1)

Underwriters Revise Industry Standards

CHICAGO—Latest draft of Underwriters' Laboratories' proposed standard for "air conditioning, commercial and domestic refrigeration equipment" is being submitted to manufacturers of listed refrigeration equipment as well as members of casualty and electrical councils and the Industry Advisory Conference on Refrigeration.

Initial draft was issued last October. Further comments on the revised draft should be sent to UL before Sept. 14, 1951, and "there will, of course, be a reasonable interval after that date before the proposed standard becomes effective," explains S. V. James, engineer of UL's casualty and automotive department.

Numerous changes and additions have been incorporated in the latest revision.

A new paragraph permits the use of cords or fixture wire within the metal walls of commercial cabinets "provided there is no combustible material in the raceway formed by the metal walls" and that suitable wire or cord is used.

Under the general heading of "compressor motors" this paragraph has been added: "Motors used on oxygen therapeutic equipment shall be of the hermetic or totally enclosed type."

Two additional new paragraphs on motors read:

"Motors used on oxygen therapeutic equipment shall be of the

(Concluded on Back Page, Column 3)

Popular 'Television Kitchen' To Continue TV Shows

PHILADELPHIA — Philadelphia Electric Co. has decided to continue sponsorship of "Television Kitchen," a cooking school program, for another six months, according to a spokesman for station WPTZ.

The program is televised by the station each Wednesday from 2 to 2:30 p.m.

It is said to be day-time TV's oldest continuously-sponsored show, having been a regular feature on WPTZ since 1947.

Indicative of the popularity of "Television Kitchen" is the fact that 800 to 1,000 requests are often received weekly for recipes used on the program by Florence Hanford, who is home economist for the utility.

'Joe's News' Keeps Dealers Posted on Appliance Doings

ST. PAUL—Here's a new wrinkle in selling appliances: Joseph Bauderer, salesman for the St. Paul branch of the Westinghouse Electric Supply Co., issues his own newspaper to dealer-customers.

Called "Joe's News," the one-page paper carries news on inventory conditions and promotional activities, and in addition, selling messages as editorials.

Bauderer himself bears the expense of printing the newspaper, and he explains that "results to date have more than justified the time and money spent on the project."

Dealer Will Match Refrigerators to Any Color Scheme; Pastels Rate High

HOUSTON, Tex.—The setting up of a complete paint shop, which provides a factory-like enamel job in any color the customer desires, is being tried by Joske's, appliance dealership here.

Joske's is now featuring custom-colored refrigerators in Sunday rotogravure advertisement, as well as in window displays, the department itself, all with good results, according to B. B. Williams, appliance manager.

"Colored refrigerators, and in fact, all major appliances, appeal sharply to young couples," Williams emphasized. "About 90% of the new small homes being built around Houston involve bright colors in all walls, including the kitchen, and young newly-weds seem quite willing to pull away from the traditional all-white box. Giving them a chance to match up blues, greens, chartreuse, tans, browns, and even multi-colored boxes, with their kitchen decor, has brought a lot more volume than we had expected."

Prospects, if they wish, may visit Joske's own paint shop, where a factory-trained expert applies the baked-on finish in DuPont Dulux enamel, in the specified color. The charge amounts to \$20, which is "a real bargain," as Williams put it, inasmuch as several coats are applied, rubbed down, and given the benefit of high-temperature baking, which insures the same wear from the new colored paint job as from the original white.

Colors which Joske's is offering, include shamrock green, Chinese red, canary yellow, and a huge selection of pastels, which are derived from basic colors, which permit housewives to exactly match the home's color scheme. A sure-fire indication of the fact that colored refrigerators are catching hold is that numerous prospects are asking whether they may have metal kitchen cabinets, ranges, automatic washers, and other appliances finished in the same color, Williams pointed out.

Hotpoint Offers 3rd Reprint of 'Electricity vs. Bottled Gas'

CHICAGO — Hotpoint announced that in response to requests, a third reprinting is being made of "Electricity versus Bottled Gas," a selling guide recently developed by the company in which operating costs, uses, safety, and speed of electricity and liquefied petroleum gases are compared.

Almost 10,000 copies of the booklet are now being used by public utility companies and local appliance dealers in all parts of the country.

Taylor Appliance Sold

BIG SPRING, Tex.—Taylor Appliance Co., owned and operated by Elton Taylor, has been sold to Cook Appliance Co., 212 Third St. Manley Cook and C. L. Cook are the owners.



PET FOODS are removed from the freezer by Mrs. Bell, wife of the owner of the sporting goods store. The frozen pet food was so successful that now the former side line has become a regular business.

Frozen Pet Foods

Sporting Goods Store's Side Line Develops Into Full-Fledged Business with Regular Delivery Route

PHILADELPHIA—A side line of selling pet foods in the Charlie Bell sporting goods store here has been developed into a full-fledged business when the owner got the idea that it would be a good idea to invest some money into a freezer cabinet for storing packed dog foods.

"We always stocked dry dog foods for pet owners," says Bell, "because it was asked for and we felt that it tied in very well with our line of pet supplies. Then we began to get requests for fresh ground meats, liver, and other packages that are sold by regular pet supply houses and we decided to add this to our lines of pet foods."

A freezer was installed and a line of fresh beef, ground meats, and other dog foods were placed in it. When store customers saw the freezer and the store signs promoting frozen meat packages, they asked if Bell couldn't make regular deliveries to them. This gave him the idea of starting a route.

Being a pet owner himself, Bell has a general idea of the amount of meat that a dog should have daily and how his diet should be varied. Complete knowledge of dog care isn't necessary, however, for pet owners usually know what to serve their dogs and the quantities.

"We deliver to our customers on a daily, every other day, and a once or twice a week basis," explains Bell. "It all depends upon how much the customer wants to keep on hand and how much is consumed by the pet. In addition to our serving frozen meats, we supply our customers with dry foods, medicants, dog furnishings, and supplies. We have now established a regular daily delivery route."

As pet owners are often familiar with other pet owners, Bell inquires about them and is given additional food prospects. What started off with a handful of deliveries daily is now a full day's work and Bell expects to place a regular delivery man on his truck so that he can spend time in his store and also in promotional work to build up this profitable frozen pet food business.

Bell has acquired a list of dog licenses and is planning a direct mail campaign in an effort to expand his frozen food business. He is going to send out a letter that will have a return stamped postal or the prospect will be able to phone him for regular meat deliveries.

"Sporting goods dealers are missing a profitable business by not stocking frozen pet foods," says Bell. "This line brings in repeat business and helps the shop maintain regular contacts with the customers for ad-

ditional dog furnishings and sporting goods as well as other merchandise carried by the store, such as toys.

"Pets are fed daily and the majority of dog owners take great pride in their animals which means that they change their diets regularly, give them proper care, and must keep buying pet supplies. This means profits to our business."

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Regardless of the UNIT You Buy...

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Seamless Copper Tubes
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Capacities— $\frac{1}{3}$ thru 25 H. P.
All Water-cooled, Double tube, Counter-flow

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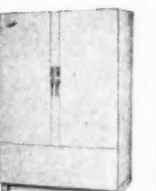
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ABC-TV Air Conditions Elysee Theater Studio

NEW YORK CITY—The American Broadcasting Television Studio in the Elysee Theater here is being air conditioned by Typhoon units, according to an announcement made by the Typhoon Air Conditioning Co. here. The Mid-Town Conditioning Co. is installing the equipment, which amounts to 60 tons of refrigeration. ABC-TV also plans to install other Typhoon equipment in the same building in the near future.

Locker Plant Serves as Fur Storage Center in Hutchison, Kansas

HUTCHISON, Kans.—Steady promotion of "fur storage at 32°" promoted by playing up the fact that refrigeration alone guarantees perfect safety," has developed this service into a profitable specialty at the Carey Locker Service Co. here.

Carey Locker Service, which operates a complete "Refrigeration Center" including 2,200 standard metal lockers, a variety of holding rooms, and low temperature storage rooms, in a 4-story building near downtown Hutchison, went into fur storage several years ago, according to Dave Johnston, manager.

Utilized is a vault room on the fourth floor, which can readily accommodate more than 2,200 fur coats.

Although the plant is already equipped with a thoroughly efficient ammonia system, an additional 10-ton Carrier package unit has been installed, which insures quick reduction of temperature when necessary, and operates as a "standby unit" to maintain temperatures at 32°.

Rates charged are simply 3% of the owner's valuation of the fur coat, with a minimum charge of \$10.

Ace Supply To Represent Sweden In Allentown, Pa.

SEATTLE—Sweden Freezer Mfg. Co. here has announced the appointment of Ace Hotel & Bar Supply as the authorized Sweden freezer sales outlet in Allentown, Pa.

Ace Hotel & Bar Supply has served the greater Allentown community for over 20 years and now adds Sweden speed freezers to its broad line of hotel, bar, and restaurant equipment.

Other lines handled include: General Electric commercial refrigeration, Toastmaster, Griswald, Ace soda fountain, and various fixtures of its own manufacture.

The firm is operated by Nathan, Louis, and Benjamin Weiner and serves over 500 accounts in this heavily populated sector.

Detroit May Control Activities Of House-to-House Vendors

DETROIT—A resolution calling for development of a model ordinance designed to "control and place under strict regulation all house-to-house street vendors" was accepted recently by the Detroit Common Council.

Submitted by Councilman Del Smith, the resolution was referred to Nathaniel Goldstick, assistant corporation counsel. He will consult with the Better Business Bureau, the Retail Merchants Associations, and other groups regarding preparation of the proposed measure.

Claiming that some door-to-door canvassers are an annoyance to the public, Smith told the Common Council that the activities of these vendors should be controlled and regulated, "removing the possibility of our citizens and reputable merchants becoming the victim of the imposter that arises from the present arrangement."

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Display Cases—Double Duty
Dough Retarders
Dry Beverage Coolers
Florist Refrigerators

Underwriters' Approved

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Heat Pump Seen as Source of Power To Replace Dwindling Energy Supplies

PORTLAND, Ore.—Heat pumps offer a source of energy that 100 years from now may supply 200 billion horsepower-hours a year, predicts G. W. Gleeson, dean of engineering at Oregon state college.

As a result, the heat pump should be considered as one of several possible substitutes for our present dwindling sources of energy, Gleeson told the American Society of Heating and Ventilating Engineers at its semi-annual meeting here.

"It is highly probable that the pattern of energy usage in the not too distant future will involve an appreciable amount of substitution of sources, either directly or through new process development," Gleeson predicted.

"Considerations of energy alone," he also declared, "may indicate possible shifts of population centers and most certainly shifts in industrial concentration."

Our present chief sources of energy, including coal, petroleum, oil, shales, natural, and even the still to be exploited atomic energy, are classed by Gleeson as "discontinuous" sources in that the supplies are limited (including the amount of fissionable material).

In addition to conserving these

supplies, he suggests research and effort in using water power, energy from vegetation, solar energy, wind power, earth heat, tidal power, tropical waters, and the heat pump.

Concerning the latter, Gleeson states, "extensive studies have greatly improved techniques in use of the heat pump."

Although not a source of energy in itself, the heat pump does efficiently convert "low grade" sources of heat energy into higher temperatures. For that reason Gleeson finds it of interest in the conservation and development of energy sources.

Refrigerated Candy Case Ups Year-Round Sales

SAN ANSELMO, Calif.—Installation of a refrigerated display case has resulted in year-round sales of 300 lbs. of chocolates per month for Jack's Drugstore here.

The glass-front display case keeps Jack Minnes, head of the store, in the candy business during the summer months now by maintaining temperatures between 35 and 40° F. throughout the hottest weather.

The case is divided into 18 compartments, eight on top for bulk

Own Ice Cream Plant Helps Drugstore Hold Price Line on Packaged Ice Cream

ESTES PARK, Colo.—Manufacturing approximately 90 gals. of ice cream per week since 1935 has helped Bert McConnell, owner of McConnell's Drugs here, to "hold the line" on ice cream prices, and to build patronage.

"Probably no item sold in the drugstore causes more irritation and loss of goodwill than jacked up ice cream prices," McConnell said.

"Therefore, we have balanced our ice cream production to make possible a retail price of 75 cents a quart, and point out to customers that this is the same price at which we have

been selling ice cream for years."

McConnell Drug Co.'s ice cream manufacturing plant is set up in the left-rear corner of the store. It uses completely automatic equipment operating behind a full-vision display window fronting on one of the busiest highways in the state.

Almost every tourist visiting the Estes Park vacation area is immediately familiarized with the fact that McConnell's makes its own ice cream by a large sign running all the way across the front of the store reading "We make our own ice cream."

To give his customers better value and more satisfaction, McConnell has set up a system whereby the pint and quart containers used are filled with the first-run ice cream, which packs more tightly into the containers.

"We have found that the first half of the run is best for our retail sales accounts, and the latter half of the run for fountain service."

"We believe in giving better value in ice cream, simply because it insures steady traffic through the summer months, keeps the fountain active, and has built up a reputation for fair dealing," McConnell said.

SERVICE ON THE SPOT IN 3 EASY STEPS



- 1 loosen cap screws
- 2 raise power element
- 3 lift out cage

Now the valve is ready for cleaning or repair without removing it from the line. If you want to change capacity, just change the cage.

EASY—ISN'T IT!

This simplified construction also reduces friction—gives faster valve action. All internal parts are made of corrosion-resistant brass or stainless steel. For "Freon 12," "Freon-22," Methyl Chloride.

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Designers and Manufacturers of Thermostatic Expansion Valves; Evaporator Pressure Regulators; Solenoid Valves; Float Valves; Float Switches.

Hayes Appointment --

(Concluded from Page 1, Column 3) many years of experience, is well known in the refrigeration field and for a long period was manager of the Bowser Refrigeration Co. in Connecticut. During the war he was a colonel on the staff of Gen. Hardy and was in charge of the production of ammunition.

Clayton L. Coulter, who has been general manager of Lehigh's Lancaster plant for several years, is moving to Easton to become assistant to Frank E. Shumann.

Coincident with the announcement of personnel changes, Shumann stated that while the company now has defense orders that amount to several million dollars, mostly prime contracts, that there will be no interference with the refrigeration production and no interruption with the work of the engineering department in its efforts to enlarge and improve the line of condensing units.

During the past six months, it was pointed out, Lehigh has made many forward moves in refrigeration. Lehigh now has a complete line of hermetic units—from 1/4 through 1/2 hp.—in both low torque and capacitor types. Progress has also been made in the development of hold-over and all-electric truck units as well as new type automatic highside defrost units for use with all types of evaporators.

NEW PRODUCTS?

Turn to "What's New" Page for useful information on new products. Use Key No. for fastest service.

Govt. Gas Ban --

(Concluded from Page 1, Column 4) age almost certainly will confront us next winter."

Brown stressed that no decision on issuance of the order will be made until after meetings with Secretary of the Interior Chapman, members of the gas industry, the Federal Power Commission, and, if possible, state public service commissions.

He said that the order, if issued, would permit exemptions or modifications in cases where supplies of natural gas were adequate.

The proposed order was immediately protested by the Gas Appliance Manufacturers Association. In a letter to C. P. Rather, assistant deputy administrator of PAD, H. Leigh Whitelaw, GAMA managing director, declared that such an order "would ruin a great many companies, large and small, employing thousands of people dependent upon the public's use of available gas supplies."

"The problem with which you are dealing," the letter said, "can be solved by use of existing procedures. Where restrictions have been necessary, the public service commissions of the different states have customarily issued restricting orders pertaining to the use of gas. For this reason, our members feel very strongly that any limitation order on a national basis is unnecessary, even though subject to appeal for relief."

Other trade associations were said to be registering opposition to the proposal. These reportedly included the American Institute of Wholesale Plumbing & Heating Suppliers, and the Heating, Piping & Air Conditioning Contractors Association.

'Strong' Extension of Credit Controls Seen Unlikely

WASHINGTON, D. C.—There seemed to be little chance that Congress will put through a very "strong" extension of the Defense Production Act. As the House of Representatives debated one amendment after another during the past week it seemed quite apparent that the Administration's hopes of getting "tough" controls was a losing bet.

However, no action has yet been taken, as this issue goes to press, on the matter of consumer goods prices and consumer credit controls.

Consumer Credit --

(Concluded from Page 1, Column 4)

The board's stand was backed by Economic Stabilizer Eric Johnston, who said that any easing of credit controls would be "the wrong direction to go."

The Senate and House Banking Committees have written restrictions, varying somewhat, into the pending economic controls bill which would limit the board's power to apply restrictions under Regulation W.

The Senate committee has stipulated that the board should relax controls when inventories accumulate in affected industries and unemployment become a problem.

Chairman William M. Martin, Jr. of the Federal Reserve Board in his letter said that if Congress wants the regulation manipulated for other purposes than "restraining over-expansion in credit," it should "relieve the board of any responsibility."



Frigidaire Model RO-20 electric range.



Frigidaire Model MO-81P refrigerator.

No Appliance Auction Allowed, Charlotte, N. C. Commission Rules

CHARLOTTE, N. C.—The request of L. G. Levy of Philadelphia to rent the Armory-Auditorium for a five-day appliance and television set auction was denied by the Parks and Recreation Commission because of alleged misrepresentation.

It was said that Levy named a Charlotte police officer as local sponsor but that the officer had no connection with the planned auction.

Before taking the action, the Commission had listened to Charlotte appliance and TV wholesalers and retailers express opposition to the proposal. Main points made were that rebuilt TV sets might be sold with no guarantee of performance or qualified service and that the auction would upset the local market.

Ansul Chemical, Betz Corp. Sales Agreement To Continue

MARINETTE, Wis.—Ansul Chemical Co. has extended its sales agreement with the Betz Corp., George B. Vermilye, sales manager of Ansul's refrigeration division, announced recently. Ansul is now representing Betz in Indiana, Kentucky, Missouri, Kansas, Colorado, Wyoming, and in parts of Michigan and Illinois.

The agreement between the two refrigeration equipment manufacturers went into effect July 2. Prior to this, Ansul represented Betz in the southwest.

Floyd Duvall is Ansul district manager in the Indiana-Kentucky-Michigan area; Dwight "Dyke" Hardie in the Missouri-Kansas-Colo-rado-Wyoming-Illinois area.

New Frigidaire Models --

(Concluded from Page 1, Column 1) vegetables. Suggested retail price is \$319.75.

The other new refrigerator is an 11-cu. ft. Standard model (SO-110) with approximately 21 sq. ft. of shelf space.

It features the Frigidaire Meter-Miser; a full-length door with vertical latch; large Super-Freezer with 29 lbs. frozen food capacity; acid-resisting porcelain finished interior; four full-width shelves including two half shelves and a swing-down utility shelf; two Hydrators of 23.4-qt. total capacity that can be stacked for greater flexibility; and cold storage tray. It retails at \$299.75.

The new electric range (Model RO-20) has many of the features of the more expensive 40-in. models, but is designed for smaller family budgets. At \$263.75 it is the lowest priced 40-in. range in the line. Raymond Loewy styling includes slanted front and one-piece flowing top with cooking top lamp.

Like all Frigidaire ranges, it is porcelain finished inside and out. Other features include a new twin-unit oven that measures 16 in. wide, 19 in. deep, and 20 in. high; two 6-in. and one 8-in. radiotube cooking units; a Thermizer Cooker, for deep well cooking and baking; Cook-Master and Simpli-Matic oven controls, which allow automatic cooking, baking, and roasting in the oven; and large full-width and single-width storage drawers.

Appliance Store Opens

HAMILTON, Ont., Can.—Better Housekeeping Shops, Ltd., has opened a new appliance store at 267 King St. East, hailed as "Canada's most modern television and appliance store." S. C. Somer is president and Pete McGregor is manager.

Warren Models L-5 and L-10 Stimulate Impulse Purchases!

Model L-5



Model L-10

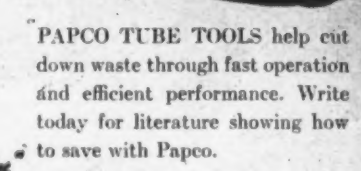
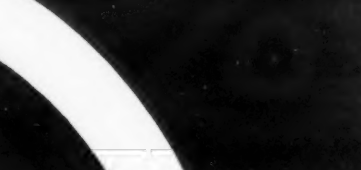


A hermetically sealed compressor is installed in the bottom, and copper coils surround all four walls. The Warren L Models are 23" wide, 41 1/4" high (32 1/4" with lid up). The L-5 is 33 1/2 inches long; the L-10, 60 1/2 inches. No mechanical installation is necessary. Just plug them in anywhere. They roll freely on permanent casters.

These freezers are the easy, economical way to extra earnings from frozen foods. As display chests or storage cabinets, the L-5 and L-10 are sure profit makers. Defense plants have found Warren L Models ideal as rivet coolers. For further information, write THE WARREN COMPANY, INCORPORATED, P. O. Box 1436, Atlanta 1, Georgia.

THESE Warren L Models for frozen foods and juice are self-contained and space saving—dependably economical. The one-piece, porcelain-enameled steel exteriors are handsomely complemented with a gray-plastic-covered, fully insulated lid.

Adjustable spring hinges allow safe, finger-tip raising and lowering of the lid. In the raised position this superstructure lid reveals six full rows of 1 1/4-inch price tags, which also accommodate full-color Plastikolor photographs of appetizing foods—a compelling stimulant to impulse purchases by self-serving shoppers.

'PENNYwise purchasing agents standardize on QUALITY tubing**HIGH STANDARDS at PENN UNAFFECTED by SHORTAGES**

Curtailment of copper for consumer products is a natural result of national emergency. The government needs more and more tubing for military equipment, and of course, quality is an essential requirement. After filling defense orders, Penn has less tubing left than is normally sold through refrigeration, automotive and bottled gas outlets. As a result, allotments have been reduced—however, you can always count on 100% quality from Penn. Tubing bearing the Penn trademark is 100% dry—100% clean and bright—100% easy bending. Remember Penn—the tube that goes further.

For Quality Tubing - Say "Penn Again"



PENN BRASS & COPPER COMPANY

ERIE • PENNSYLVANIA • TELEPHONE 3-5111

PAPCO TUBE TOOLS help cut down waste through fast operation and efficient performance. Write today for literature showing how to save with Papco.

OPS Distribution Div. Given Jurisdiction Over Appliance Sales

WASHINGTON, D. C.—Establishment of a distribution division in the Office of Price Stabilization to handle price control in the fields of non-food retailing and wholesaling of consumer goods was announced recently by Director Michael V. DiSalle.

The new division will issue and administer all regulations concerned with price control at wholesale and retail of consumer goods presently under the jurisdiction of the consumer soft and durable goods divisions.

APPLIANCES COVERED

These goods include appliances, home furnishings, housewares, and accessories, along with many other items.

The division will be under the general supervision of Harold B. Wess and Thomas L. Karsten. Wess is director, as well, of the consumer soft goods and consumer durable goods divisions. Karsten is his assistant director for the soft goods division.

An assistant director will be appointed as operating head of the distribution division.

"The size and complexity of distribution operations in the consumer goods field," DiSalle said, "clearly call for handling by a separate division."

"The divisional form of organization will allow us to give the operating head the assistance of specialists in particular phases of distribution along with the help of division and branch lawyers and economists."

The existing distribution branch of the consumer soft goods division will be absorbed in the new division, DiSalle said. Recruitment of additional staff up to full division strength, he added, will be pushed with all possible speed.

CPR 7 IS MAJOR TASK

A major task of the new division, Wess said, will be to take over administration of Ceiling Price Regulation 7. This is the regulation covering consumer goods whose retail sales run into billions of dollars annually.

The division will complete and issue the wholesale regulations which have been in preparation for some time. It will devise pricing techniques for different kinds of retailing and wholesaling, and will make necessary revisions of techniques currently in use. It will deal with the special problems of small retailers and wholesalers.

The distribution division will also provide expert counsel to other divisions in OPS which are concerned with the pricing of other commodities. In general, Wess said, the division will attempt a kind of over-all resolution of distribution problems such as was never done under the war-time OPA and which thus far has not been done under OPS.

LOOK to LARKIN for Low Prices



LARKIN CEILING HUMI-TEMP

Price is only one factor in the selection of any product—especially one that has so important a task as protecting valuable perishables. Performance must come first. Quality cannot be overlooked. Durability is highly important. Larkin has all of these. And Larkin has low prices, too. Compare them and see for yourself how low they really are.

For the latest Larkin price list, write your wholesaler. If you wish, write direct to us and we shall be glad to send you one.

Manufacturers of the original Cross-Fin Coil — Humi-Temp Units — Evaporative and Air Cooled Condensers — Air Conditioning Units and Coils — Direct Expansion Water Coolers — Steel Vacuum Plate Coils — Heat Exchangers.

WATCHDOG OF THE NATION'S FOOD SUPPLY

LARKIN COILS
309 MEMORIAL DR. S.E. — ATLANTA, GA.

Meter Plan Survey

61% of Commercial Dealers Used Meters In 1950;
72% Intend To Make Use of Them During 1951

CHICAGO—Meter plan selling by commercial refrigeration dealers increased again during 1950, a survey conducted among 499 commercial refrigeration dealers from all parts of the country revealed recently.

The survey was made by International Register Co., manufacturer of Meter-Matic coin meters. Answers to questionnaires submitted to the dealers indicated that 61% used the meter plan during 1950 and 72% planned to use it during 1951.

The increase in use of meters has been steady since 1947 when the survey was first made, according to the company. In 1947, 17% of dealers interviewed used meters. This went up to 36%, then 46%, and 61%.

Asked if the meter plan helped them to increase sales, 230 out of the 266 dealers who used the plan last year, said that it did. Sixteen dealers did not reply. Ten said the help was questionable and 10 gave a definite "no."

Thirty-nine per cent of the dealers using the plan carried the meter plan paper themselves. Besides this 102 dealers, 54 financed through the local bank, 32 through a finance company, 72 through a combination of the two, and three through the manufacturer's finance company.

The question: What down payment did you generally require for equipment sold on the meter plan? brought these replies:

None	28	11%
1% to 10%	82	31%
11% to 20%	78	30%
21% to 33 1/3%	38	14%
Depended on customer ..	35	13%
No replies	5	1%

Seventy-three per cent of the 224 dealers replying to this question reported no repossession on meter plan sales. This was the breakdown in percentage of units sold:

None	171
Less than 1%	9
1% to 2%	27
3% to 5%	11
6% or more	6

Most of the dealers did not advertise the meter plan during 1950. Those 91 dealers who did, used the following media:

Direct mail	51
Newspaper	18
Radio	1
More than one media	21

Almost all of the dealers, whether they used meter plan selling or not, thought that sales during 1951 would be about the same as 1950 or better. Only 18 out of 378 replying—about 5%—thought that sales would be under those of 1950.

Of the 266 dealers who used meter plan selling, nearly 100 of them sold from one to nine units by this method. About 60 sold from 10 to 24 units and approximately 30 sold from 25 to 49 units. Just under 20 sold 50 to 74 units, nine sold 75 to 99 units, and 11 sold 100 to 149 units. Ten sold 300 or more units.

Frigidaire Names Davison

TOLEDO—Davison Associates, Inc. here has been appointed distributor of Frigidaire commercial refrigeration and air conditioning units in the Toledo area.

The firm operates in northwestern Ohio and southern Michigan.

Grocers Plan To Expand, Buy New Equipment Despite Govt. Controls

CHICAGO—Fifty-six per cent of the nation's independent retail grocers are planning store remodeling and purchasing of new equipment this year despite the fact they are at present hampered by government regulations, price controls, and allocations, it is pointed out by Gerard Klomp of Ogden, Utah, president of the National Association of Retail Grocers.

Klomp pointed out that the National Production Authority placed a ban on new commercial construction exceeding \$5,000 in a 12-month period. However, he reported 56 out of every 100 grocers who were surveyed by NARGUS plan to remodel their present stores and 69% plan to purchase new equipment.

He said 63% of the grocers planning to remodel in 1951 last remodeled their present stores within the past three years and will spend an average of \$2,000 in 1951.

Govt. Sub-Committee, Book To Aid Small Businessmen

WASHINGTON, D. C.—Two more aids to help small businessmen get along under the defense mobilization program were announced recently by the government.

1. The Senate small business committee established a sub-committee headed by Sen. Blair Moody, Michigan Democrat, to "investigate misuse of critical supplies and unemployment resulting from the transition from civilian to military production." This "watchdog" sub-committee

has already started an investigation of steel shortages among small businessmen. Hearings will be held in Detroit, Pittsburgh, Washington, D. C., and possibly elsewhere.

2. The Defense Production Agency has issued a booklet entitled "Pooling Production for Defense." This publication is intended to give small businessmen complete information.

Buy Peerless FOR PERFORMANCE

DRIP-PUMP for Condensate on Air Conditioners



The Peerless Drip-Pump solves the troublesome drainage problem—on air conditioners, coolers, refrigerators and other machines where condensate is present—by eliminating hazardous gravity drains altogether! The Drip-Pump lifts condensate up and out, overhead... saves valuable space.

Illustration shows Model DP-2 high capacity high lift pump for air conditioner applications. Also available is Model DP-1 packless centrifugal type pump, driven by "flea-power" motor... the ideal pump for use for dome, unit or flash coolers. Both models are ruggedly built for long, hard service; easily and quickly installed. Write for full information.

Peerless of America, Inc.

1501 No. Magnolia, Avenue
Chicago 22, Illinois, U.S.A.

"This is It!"

THE SHERER

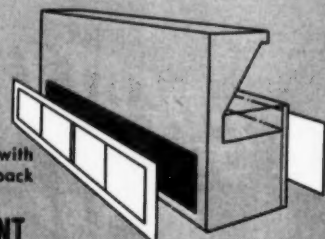
Here's an open display case that you can sell because you can make it fit your customer's individual needs exactly. With the **NEW** Sherer Model UL2710-C YOU CAN:

- 1 add or subtract whatever you need to fit the requirements of your customer's store
- 2 create 12 different body styles
- 3 change it on your floor — before you deliver it
- 4 or you can change it, at any time in the future — right in the user's store.

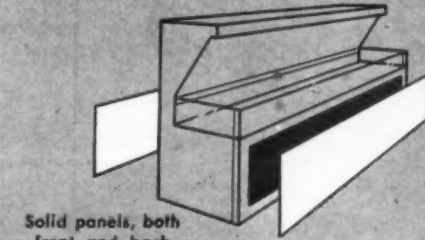
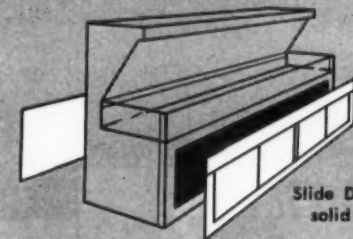


MODEL UL2710-C

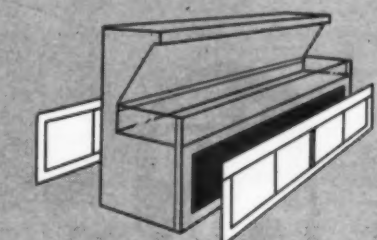
Solid front with slide door back



Slide Door front with solid panel back



Solid panels, both front and back



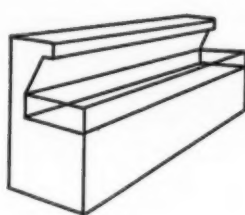
Slide Doors both front and back to make it a "pass through" Case

4 CHOICES OF STORAGE BASE ARRANGEMENT

3 STYLES OF SUPERSTRUCTURE



High canopy with **Sliding Mirrors** that multiply the appeal of the merchandise on display—and makes servicing possible from the rear as well as the front



Low canopy with fixed mirrors



Stainless Steel Cap for low cases. Where required, can be used back to back for island display set-up

SHERER OFFERS FREE STORE ENGINEERING AND PLANNING SERVICE. Write for details. Also write for details on Sherer's New Finance Plan.

SHERER-GILLET COMPANY
Dept. AC
MARSHALL, MICHIGAN



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If you want to put the advantages of these new Sherer developments to work for you
WRITE FOR FRANCHISE INFORMATION
Name.....
Address.....
City.....State.....
.....

Trion To Install Air Filters, Cleaners In Japan

McKEES ROCKS, Pa. — Electric air filters with a combined air cleaning capacity of over 59,000 c.f.m. will soon be installed in leading hospitals, pharmaceutical plants, and universities throughout Japan, according to E. W. Meyers, Jr., president of Trion, Inc. here.

He said Trion filters will provide clean air for ampoule filling and sealing rooms, streptomycin powder filling rooms, gauze and bandage packing departments, and in the medical processing labs of 13 pharmaceutical companies in Japan.

A constant recirculation of germ-free air to the surgery room of the Teishin hospital in Tokyo will insure modern methods of sanitation and sterilization.

A further application of Trion equipment will be in the medical pharmacy of Tokyo university, it has been announced.

Memphis Office Bldg. Cooled

MEMPHIS — Work of air conditioning the Manufacturers' and Merchants' building here is under way, according to Philip Belz, who holds a lease on the structure.

Belz said that all offices in the west wing on both the sixth and seventh floors had been air conditioned.

"Air conditioning," he added, "is optional with the tenants but we are hoping to eventually have the entire Manufacturers' and Merchants' building air conditioned."

CANDY STORAGE Nuts, Candy Held Under Refrigeration Stay Fresh Longer, Boost Consumption

CHICAGO—Consumption of candy is greater in areas where the candy is stored under refrigeration than in other areas where little or no refrigeration is used.

This was the statement of Dr. J. G. Woodroof of the Georgia Experiment Station, made at the recent annual convention here of the National Confectioners Association.

In New England states, as an example, he said, per capita consumption of 20 lbs. is twice the figure for candy eaten in Mississippi, Louisiana, and other southern states. The principal factor accounting for this difference, he said, is the wider use of refrigeration by the New England candy industry.

Dr. Woodroof appeared at the candy makers' meeting to report on a research project he has been directing for two years to determine the best means for keeping peanuts, pecans, and almonds in perfect condition for year-round use in confections. Sponsors of the study were the National Confectioners Association and the Refrigeration Research Foundation.

REPORT SHOWS VALUE OF REFRIGERATION

In general, it was found, results have demonstrated the superior value of refrigeration as against common storage and have refuted a belief common among makers and sellers of candy that refrigeration is detrimental to candies.

It has always been difficult to keep good quality nuts available the year-round, Dr. Woodroof observed. Dur-

ing summer months there are also the problems of staleness, rancidity, and insects in nut candies, which cause definite decline in manufacture and use of nut candies. It was felt, he said, that this can be corrected through better storage conditions of candy ingredients and finished candies.

FOUR OBJECTIVES PROPOSED

Four specific objectives were proposed for the study he undertook, he recounted. They were to compare:

1. The quality of refrigerated and unrefrigerated, shelled and unshelled, Georgia Spanish peanuts and Virginia peanuts.

2. The quality of refrigerated and unrefrigerated, shelled and unshelled, Texas seedling pecans and Georgia Stuart pecans.

3. Refrigerated and unrefrigerated, shelled and unshelled, California almonds.

4. The quality of raw nuts and nuts processed in candy.

Unrefrigerated nuts, after being fumigated and placed in paper bags, were stored in a dry, barn-like brick building, he explained. Refrigerated storage was in a room of a commercial refrigerated warehouse, held especially for nut storage at 36° F. and 60-70% relative humidity.

Rating of the candies in which the stored nuts were utilized was done by about 100 persons in the confectionery and refrigerated storage industries. Among outstanding results, briefly stated, were the following:

1. Refrigeration was remarkably effective in preserving the fresh

color, aroma, and flavor, retarding development of rancidity, as well as keeping insects out of pecans and peanuts in storage. The results from almonds were less definite.

2. Superiority in color and flavor of unshelled nuts over shelled nuts when held in either refrigerated or common storage was very marked.

3. Of the five kinds of nuts used, Stuart pecans had slightly the shortest storage life, followed closely by Texas seedling pecans, then by Spanish peanuts, followed closely by Virginia peanuts, with almonds having the longest storage life.

REFRIGERATION LENGTHENED STORAGE LIFE

Dr. Woodroof reported that when they were refrigerated, unshelled peanuts, pecans, and almonds retained "excellent" quality throughout experiments of 64, 57, and 31 weeks, respectively. Refrigerated, shelled peanuts fell from "excellent" to "very good" in the rating, after the 18th week of storage, while refrigerated, shelled pecans fell from "excellent" to "very good" quality after the 13th week.

All refrigerated peanuts and pecans, shelled and unshelled, remained "very good" or better for more than a year in common storage.

In common storage, unshelled peanuts fell from "excellent" quality to "very good" quality after the 13th week, and unshelled pecans fell from "excellent" to "very good" quality in 16 weeks. Both peanuts and pecans remained "very good" or better for a year in common storage, if unshelled.

Also in common storage, shelled peanuts fell from "excellent" to "very good" quality in 14½ weeks, and to "good" quality in 29 weeks, which rating they held for the remainder of the year. Shelled pecans in common storage lost quality quite rapidly, falling from "excellent" to "very good" quality in 11½ weeks, to "good" quality in 18 weeks, to "poor" quality in 30½ weeks and to "very poor" quality in 52 weeks.

When nuts were graded in candy, they were rated by the judges considerably higher than when graded raw, this, as Dr. Woodroof explained it, being due to the fact that the sweetness tended to mask much of

the stale, rancid, or otherwise objectionable flavors developed during prolonged improper storage.

Refrigerated, unshelled nuts, it was noted in the report, stood out in their superiority over other peanuts and pecans for year-round consumption. Unshelled nuts in common storage lost quality quite rapidly, while the keeping quality of refrigerated shelled nuts and unrefrigerated, unshelled nuts was about the same.

Staleness in shelled, refrigerated pecans developed quite rapidly for the first few weeks, but soon leveled off, so that there was little change after 25 weeks storage, while staleness in unshelled nuts, in common storage was gradual.

It was found that flavor of nuts was improved by one or two months of common storage immediately after harvesting. Peanuts or pecans refrigerated directly from the ground or tree, says the report, had less desirable flavor than those allowed to "age" or go through the usual routine of drying, cleaning, bagging, and warehousing.

"These data," Dr. Woodroof summed up, "provide a means for confectioners and others to compare ways of holding peanuts and pecans for continuous consumption. . . . They show that refrigeration at 48° F. or lower is the most practical means of (a) preventing insect infestation; (b) retarding development of mold when moisture content is high; (c) retaining optimum flavor; (d) retarding or preventing staleness and rancidity; and (e) retaining natural color of the nuts."

"Experience has shown," the report further observes, "that the lower the temperature the more satisfactorily the nuts kept, whether shelled or unshelled, and there was no injury when nuts were frozen. Storing at 28° F. was found an excellent way to dry nuts, since at this temperature the moisture in the air was reduced to a very low point. Under storage conditions, where high moisture or molding is a problem, lowering the temperature to 28° F. temporarily, may be the solution. Under prolonged storage at this temperature pecan halves became dry and brittle."

MORE INFORMATION?

Use Handy Coupon on "What's New" Page of this issue.

Use Key No. for fastest service.

B & G SERIES 1522 Hydro-Flo CENTRIFUGAL PUMP

LEAK-PROOF SEAL

The B & G Leak-proof Seal alone establishes this pump as the "buy" for your cooling tower or evaporative condenser installations. The Seal is self-lubricating and eliminates the usual leakage through the packing gland—assures long, trouble-free service.

It's a quiet pump. Long bronze sleeve bearings hold the shaft in alignment and the spring-type flexible coupling helps keep noise at a minimum. The impeller is hydraulically balanced . . . highly efficient.

Bearing bracket sub-assembly, including shaft and sleeve bearings, is interchangeable in all B & G 1522 Pumps. Easily serviced—the pump separates into three parts.

The B & G 1522 is available in all-iron, bronze-fitted, all-bronze or stainless steel units.

A GREAT COMBINATION FOR MORE EFFICIENT REFRIGERATION INSTALLATIONS

B & G Hydro-Flo EVAPORATORS

Unique design prevents oil-trapping in head passes

A certain amount of compressor crankcase oil is picked up by the refrigerant during compression. If oil is continuously trapped in the evaporator, the oil in the compressor crankcase becomes depleted, which may cause bearing trouble. If the condition is not corrected, the system eventually becomes useless, for excessive oil in the evaporator reduces heat transfer.

The diagram at left shows how this trouble is prevented in the B & G Evaporator. Note that the lower tube in pass "B" leading to pass "C," and the lower tube in pass "C" leading to pass "D" are located very close to the baffle plate, permitting any oil entering passes to travel freely with the Freon vapor back to compressor. There is no step-up or sump to trap oil!

B & G Direct Expansion Evaporators are constructed according to U-69 Code of ASME regulations.



Send for engineering data on B & G Evaporators, Condensers and Centrifugal Pumps.

BELL & GOSSETT
C O M P A N Y

Dept. CC-47, Morton Grove, Illinois

Canadian Licensee: S. A. Armstrong, Ltd., 1400 O'Connor Drive, Toronto, Canada *Reg. U. S. Pat. Off.

BETZ CEILING UNITS

Only 8 7/8 inches high

Designed Specifically for Reach-Ins

Refrigerated air is exhausted against the back wall and travels in a positive path to the bottom. There is no short-cycling, door sweating or refrigeration losses.

MODEL NO.	BTU AT 1° TD	CFM	SURFACE SQ. FT.	DIMENSIONS		
				H	W	D
100-C	100	180	36.87	8 7/8"	18 1/2"	13 3/4"
130-C	130	250	53.11	8 7/8"	24 1/2"	13 3/4"
190-C	190	310	69.23	8 7/8"	30 1/2"	13 3/4"
260-C	260	415	90.88	8 7/8"	38 1/8"	13 3/4"

See Them at Your Wholesalers

BETZ CORPORATION

HAMMOND • INDIANA

INSIDE DOPE

by GEORGE F. TAUBENECK

Included from Page 1, Column 1)
passing ship and posted at the next
part of call which might be any-
where—and you may get this in a
month or a year! !

Big Doings In Detroit

At the Nash-Kelvinator Corp. Plant Mayor Albert E. Cobo of Detroit has unveiled the first major industrial exhibit saluting the city's 250th anniversary.

Celebrating the founding of Detroit by the French explorer, Cadillac (in 1701) citizens and firms with roots in the city are putting on a series of big shows and showings this year.

Centerpiece of the Nash-Kelvinator exhibit, which stretches 340 feet across the front of the company's administration building in northwest Detroit, is the "world's largest family album." Two stories high, the triangular structure is mounted on a giant turntable which straddles the approach to the main entrance.

Inside the six-ton exhibit are two displays arranged to appear as album "pages." One contains an actual 1902 one-cylinder Rambler automobile, with life-size figures dressed in period costumes. The other contains an early Kelvinator refrigerator in an old-fashioned kitchen setting, commemorating the birth of the household refrigeration industry in Detroit.

The album "pages" are 24 feet wide and 15 feet six inches tall; picture-windows in the "pages" are 16 feet by eight feet. The turntable is nine feet above ground, and the top of the album is 25 feet high.

Flanking the centerpiece are two 75-foot scrolls bearing current Nash and Kelvinator slogans, pedestals displaying a 1951 Nash car and new Kelvinator appliances, and a series of flagpoles flying the city's 250th birthday festival banner.

If you're in Detroit this summer, don't miss it!

Out of Our Mailbag

The Hawaiian Electric Co., Ltd.
Honolulu, Hawaii

Editor:

Just a note to let you know that you are continuing to get coverage on an international basis. I was very amused to see that on the editorial page of our local newspaper your splendid magazine was quoted as the source of a politics story.

When are you coming down to bask in our sunshine?

L. W. CLIFFORD, manager
appliance division

P.S.: Clipping from the Honolulu Star Bulletin.

And we quote:

"National Press Clubmen in Washington insist that this is a true story: 'Senator Taft's opponent for reelection was Ohio State Auditor 'Jumping Joe' Ferguson—a popular vote-getter, but a fellow who hasn't achieved renown for his grasp of world affairs.'

"They tell how he came down to Washington and held a press conference during the campaign.

"What is your attitude," probed a reporter, 'toward Formosa?'

"Snapped Ferguson confidently: 'I'll take it easily by 3,000 votes,'—AIR CONDITIONING & REFRIGERATION NEWS."

"An elderly man entered a downtown bank and presented a check to a woman teller.

"Have you any identification?" she asked.

"He nodded understandingly, then drew forth a picture of himself."—Atlanta Journal.

We Can Borrow, Too

If newspapers are lifting our stuff, we can return the compliment. The following hilarious report by James Ransom appeared in a recent issue of The Detroit Free Press.

"The Greatest Show in the County put on its next-to-last performance of the season Monday.

"Playing before a small but appreciative audience, the performers, sometimes billed as the Board of Wayne County Supervisors, really extended themselves.

"Chairman John A. Kronk excelled as ringmaster, putting his pet acts, Orville Hubbard, Dearborn's nationally famous recalcitrant mayor, and Frank X. Martel, fiery American Federation of Labor leader, through their paces.

"The main performance opened when Supervisor Charles G. Oakman presented a resolution calling for adoption of an official Wayne County seal. Wayne County, founded in 1796, never has had an official seal.

"The seal showed a drawing of Anthony Wayne shaking hands with an Indian.

"Immediately, Martel jumped up, shouting, 'We stole the land from the Indians and then killed them. Do you want to perpetuate that memory?'

"Kronk's gavel pounded and he shouted at Martel, 'You're sore because that's a CIO Indian.'

"Supervisor Eugene I. Van Antwerp said, 'The only thing I don't like about this seal is that their is no mention of the Deity.'

"Kronk apparently misunderstood this. 'That's right,' he said. 'It only mentions the date by year.'

"Laughter was quieted and In God We Trust was added to the seal.

"A vote unanimously favored adopting the seal.

"This was about to be recorded when Martel demanded, 'List me as

voting NO on the ground that I don't like Indians.'

"Hubbard then took over.

"He objected to an Oakman resolution which called for an appropriation of \$4,500 to build a parking lot for sheriff's road patrol cars at Wayne, Mich.

"Oakman charged, 'You were at the meeting Friday and voted in favor of this.'

"I couldn't have favored this parking lot,' Hubbard said. 'I wasn't present Friday.'

"Oakman replied, 'The clerk has you listed as being present and you received pay for attending. I would like to have this board hold up the Dearborn mayor's pay if he insists he was not here last Friday.'

"This was voted down.

"Would someone tell me what this is all about?' Hubbard then asked.

"Kronk replied, 'Gladly. You were here, Mayor Hubbard, but you were not present.'

"This brought hysterics from the crowd.

"At \$8 a performer the Greatest Show in Wayne County cost the taxpayers \$512, since only 64 of the 97 members were present."

Good Reading

The following excerpts from THE NINETEEN FIFTIES COME FIRST, by Dr. Edwin G. Nourse (published by Henry Holt & Co.), were selected to give an indication of some of the ideas to be found in this stimulating book. Dr. Nourse was formerly chairman of the Council of Economic Advisors to the President, and vice president of the Brookings Institution.



WITH MUELLER BRASS CO. DELUXE DRIERS

Extra-capacity cone-screen filter
unequaled for efficiency in the
refrigeration industry.

FORGED BRASS ENDS
Heavy duty type with
husky wrench flats.

OUTLET RETAINER
SCREEN
By itself, equal to
the filter elements
in most ordinary
driers.

WHITE WOOL DISC
Doubles filtering
capacity.

LOCKED-IN CONE
OUTLET SCREEN
Extra capacity free
flow strainer surface.

FILTER BED
Chemically cleaned
wool mass traps fine
metallic grit or other
foreign particles.

INLET CONTAINER
SCREEN
Positive desiccant
retainer without
pressure drop.

The millions of Mueller Brass Co. Deluxe Driers that are now in service provide the kind of proof you want—proof that no other drier can approach for all-around efficiency on-the-job, and for good reason. The Mueller Brass Co. Deluxe Drier is a typical example of the dependability and quality that Mueller laboratory and development engineers have made available in so much refrigeration equipment. The famous cone screen filter greatly increases the Deluxe Driers' working life. The filter strainer unit of the Deluxe Drier removes every minute particle of foreign matter from the line—keeping the refrigerant completely clean as well as dry.

Order now from your refrigeration wholesaler.

Have these STREAMLINE products on hand
for every job where you want dependable
performance.

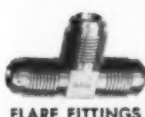


Write for catalog R-151
describing complete line
of STREAMLINE refrigeration
products.

STREAMLINE refrigeration
products are individual
and multiple packaged for
complete protection.



WROUGHT COPPER FITTINGS



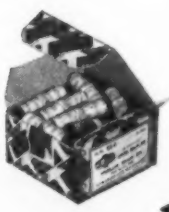
FLARE FITTINGS



LIQUID INDICATORS



VALVES



FREEZER "Sales Dynamo" FOR YOU Sensational New BEN-HUR FREEZER-PAK Kit

YOUR "Get Started" GIFT
to new purchasers of BEN-HUR
America's Finest
Farm and home FREEZERS

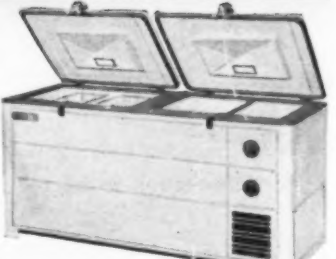
Big \$39.25 Retail Value Includes:

- BEN-HUR Ice Cube Maker \$10.50
- WEST BEND Food Blancher 12.95
- 12 16-oz. CROWN FREEZ-
TAINERS 3.00
- 12 25-oz. CROWN FREEZ-
TAINERS 3.60
- 100-Foot Roll MARATHON "TITE"
Laminated "One-Wrap" Locker
Paper 3.00
- 15 pint-size MARATHON
FREEZEX Packages75
- 12 quart-size MARATHON
FREEZEX Packages75
- 36 Polyethylene Bags, Assorted
Sizes 2.95
- 36-yard Roll PERMACEL Tape 1.00
- Automatic Marking Pencil, 1 dz.
Refills75
- BEN-HUR Plastic Defroster Paddle00

Retail Value \$39.25



Here's another spectacular sales tool to help you to
HOME SALES on BEN-HUR "America's Finest" Farm
and Home Freezers! The new BEN-HUR FREEZER-PAK
will appeal to EVERY freezer prospect. Contains a
whole season's packaging materials, enough for hundreds
of pounds of frozen foods. Helps every owner to the
start in simplified food packing and freezing. Avail-
able NOW—for a limited time only—from your Ben-Hur
Distributor.



BEN-HUR MFG. CO., Dept. AC, 634 E. Keefe Ave., Milwaukee 12, Wis.
BEN-HUR FARM and HOME FREEZERS
HEALTHFUL LIVING THROUGH FROZEN FOODS

MUELLER BRASS CO. PORT HURON 10, MICHIGAN



On Stage at New Kelvinator TV Show

J. C. Bonning (right), Kelvinator advertising and sales promotion manager, visits Paul White and Junie Keegan, 13-year-old singing star, on stage before start of the company's new television show. The Whitehead show is aired over the ABC-TV network every Saturday.

Bishop Appointed Executive Vice President of Thuro

TAMPA, Fla.—Thuro Distributors, Inc. here, distributor of International Harvester refrigerators and freezers, has announced the promo-

tion of Paul L. Bishop, former assistant general manager, to the position of executive vice president of the company.

Raymond P. Boyne, formerly associated with a Miami distributor, has been appointed appliance sales manager of Thuro.

William C. Grunow Dies, Formerly Manufactured Grunow Refrigerator

CHICAGO — William C. Grunow, whose promotion of the "safe" Grunow household refrigerator kicked up considerable fuss in the industry back in the mid-thirties, was found dead July 6 in a room in the Stevens hotel here.

Grunow's towel-draped body was found on the bathroom floor by a house physician, who had been summoned after an unidentified woman called the hotel switchboard and reported:

"A man is having a heart attack in room 2405."

Grunow and B. J. Grigsby founded the Grigsby-Grunow Co. in 1927 and began making "Majestic" radios. Grigsby-Grunow later manufactured the "Majestic" refrigerator.

Grunow left the firm in 1931 and sometime later started to manufacture the "Grunow" refrigerator, which used a low pressure "Carrene" refrigerant which he ballyhooed as making his refrigerator "the only safe one for the home," precipitating some lively intra-industry conflicts. The company eventually went out of business, leaving a considerable number of units "orphaned" in the field, which for many years gave refrigeration servicemen many a headache.

WHY WAIT?

Get your new product info pronto. Use coupon on "What's New" page this issue. Use Key No. for fastest service.

Toronto Residents Do Their Own Appraising

Owners of 'Tired Old Refrigerators' Enter Dealers Contest, Build Up His Prospect List

TORONTO, Ont., Can.—Electrical Housekeeping here alerted many Toronto residents to their need of a new refrigerator and at the same time built up an excellent prospect list through the medium of an unusual contest built around the theme: "My Tired Old Refrigerator."

Residents throughout the Toronto area were invited to take a look at their "Tired Old Refrigerator," whether electric or ice, asking themselves if it has cost them money lately, how many years they have had it, and is it liable to break down at any time.

In other words, the contestant was asked to make his or her own appraisal of his present refrigerating system, then answer five simple questions:

1. Is your present refrigerator an ice box?
2. Estimate the difference in cost to operate for one year between a 6-cu. ft. ice box and electric refrigerator. Omit spoilage and depreciation.
3. Is your present refrigerator large enough?
4. How many years old is your present refrigerator?
5. Estimate the number of correct entries received in "My Tired Old Refrigerator" contest.

The persons giving the best answers to the five questions and estimating closest to the correct number of entries received were awarded prizes which included two new refrigerators and a number of smaller electric appliances.

The contest was launched with a large newspaper advertisement which carried an entry blank form with the five questions. The contestant had merely to fill out the blank and mail it in to the store.

The contest served to make Toronto residents more conscious of their refrigeration needs, especially

Exciting! SO EASY TO WIN!

2 1951 REFRIGERATORS GIVEN AWAY—PLUS 10 OTHER LOVELY PRIZES

"MY TIRED OLD REFRIGERATOR" Contest

YOU HAVE 2 CHANCES TO WIN ONE OF THESE MAJOR PRIZES

Enter today—DON'T DELAY!

IT'S FUN—IT'S EASY

How old is your present refrigerator? Is it an electric one or an ice box? Is it safe to use? Is it liable to break down any time? In other words, make an appraisal of your present refrigerating system. Then answer the five simple questions listed below. The person giving the best answers to the five questions and estimating closest to the correct number of entries received will be awarded the grand prize. This is your chance to win a new 1951 electric refrigerator or one of the many other prizes listed in the advertisement. To enter "MY TIRED OLD REFRIGERATOR" Contest, fill out the entry blank and mail it in to the store. July 15 and Tuesday July 27 at 8 p.m. at our store 1111 Yonge Street.

ANSWER THESE 5 EASY QUESTIONS

1. Is your present refrigerator an ice box?
2. Estimate the difference in cost to operate for one year between a 6-cu. ft. ice box and electric refrigerator. Omit spoilage and depreciation.
3. Is your present refrigerator large enough?
4. How old is your present refrigerator?
5. Estimate the number of correct entries received in "My Tired Old Refrigerator" contest.

HERE IS THE COMPLETE LIST OF PRIZES

To Be Awarded Tuesday, July 16th

1. New 1951 Electric Refrigerator (Grand Prize)

2. New 1951 Electric Refrigerator

3. New 1951 Electric Refrigerator

4. New 1951 Electric Refrigerator

5. New 1951 Electric Refrigerator

6. New 1951 Electric Refrigerator

7. New 1951 Electric Refrigerator

8. New 1951 Electric Refrigerator

9. New 1951 Electric Refrigerator

10. New 1951 Electric Refrigerator

READ TITLE RULES CAREFULLY

FILLING IN YOUR ENTRY

Name _____

Address _____

City _____

State _____

Zip _____

Phone _____

Mail to: 1111 Yonge Street, Toronto, Ont.

NEWSPAPER ADVERTISEMENT used by Electrical Housekeeping, Toronto appliance dealer, to launch contest. Participants were asked to appraise their own refrigerators in terms of size, convenience, and how expensive they were to operate, then compare new models.

those with old models or who still are using ice boxes. It gave the store a good list of prospects, showing exactly where the salesmen could step in and do a selling job.

Appliance Distributor Organizes Advertising Program For Dealers In Boston Area; Share, Prorate Cost

BOSTON—A dealer organization formed to provide a way in which members can advertise in Boston newspapers consistently has been set up by a local appliance, radio, and television distributor.

The organization is called the New England Appliance Retailers (NEAR). It was established by Northeastern Distributors, Inc. At present, the group has 12 members located in or near Boston.

A spokesman for the distributor said a consistent advertising campaign has been developed for the group by an advertising agency. The plan was drawn up, he explained, because the four Boston papers do not print suburban editions and because their circulation is nearly as great as that of local newspapers in some of the towns surrounding Boston.

One requirement for membership in NEAR is that the dealer must handle all four of the distributor's major lines—Gibson, Thor, Lewyt, and Zenith.

The dealer must also agree to assume his share of the cost of all NEAR advertisements, this share to be prorated among all participating dealers.

However, the total dealer share of this cost is not to exceed 50% of the total, nor is any dealer's share to exceed \$150 in any month. The distributor and manufacturers are to pay the other 50% of the total cost.

Thus far, members of the group are Clark & Mills Electric Co., Boston; Stevens, Boston; Loveday's, Brockton, Mass.; Brookline Cycle & Radio Co., Inc., Brookline, Mass.; F. & G. Electrical Appliance Co., Inc., Chelsea, Mass.

In addition: Vorspohl's, Clinton, Mass.; F. Gorfinkle & Sons, Inc., Dorchester, Mass.; Nobo Co., West Medford, Mass.; Coleman Supply Co., Newton Corner, Mass.; Springfield Furniture Co., Inc., Roxbury, Mass.; The Key, Salem, Mass.; and Derby's Department Store, Peterboro, N. H.



For PLUS sales and profits—

sell the big PLUS in water coolers—

KELVINATOR
with the exclusive POLARSPHERE

Sales come easier, faster, with "plus" volume when you sell such famous KELVINATOR features as these—

Polarsphere power unit, that seals in efficient performance, and electric current economy . . . Pre-Cooler, that serves nearly double the amount of cooled water otherwise available . . . Spurtless feather-touch dial, that keeps the drink stream at constant level . . . 5-Year Kelvinator Warranty.

"KELVINATOR has the Coolers!" A complete line, from simple bottle types to largest capacity pressure models—for stores, offices, factories.

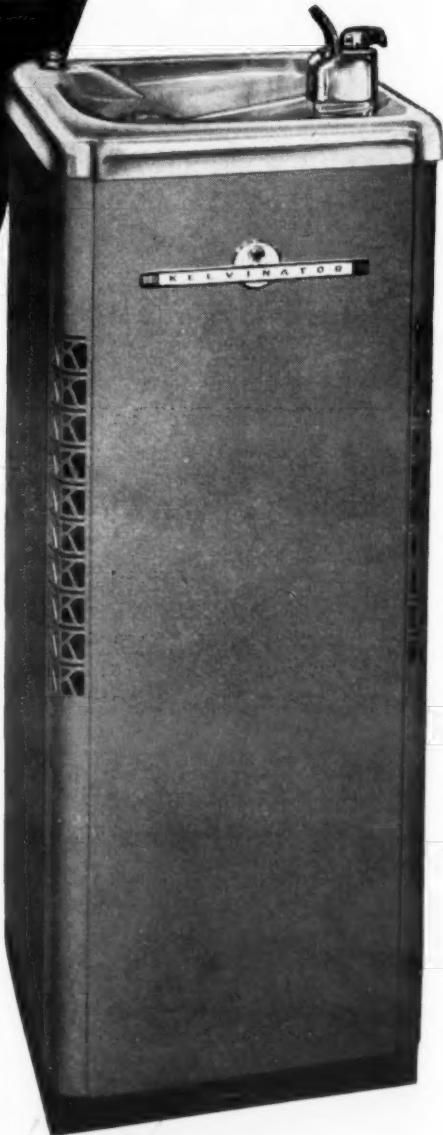
Kelvinator—the advertised Cooler! National advertising in NEWSWEEK, U. S. NEWS, and BUSINESS WEEK keeps the Kelvinator name before your best prospects.

The Kelvinator Distributor is in the local directory. Call him for full information, or write: Kelvinator Water Coolers, 108 Lucas Street, Columbus 8, Ohio.

PROFIT TODAY...BUILD FOR TOMORROW WITH

Kelvinator

THE NAME THAT SELLS . . . THE NAME THAT SATISFIES!



For information write:

VICTOR

MANUFACTURERS OF THE FAMOUS VICTOR QUICKFREEZE

PRODUCTS CORPORATION • HAGERSTOWN, MD.

YOU CAN'T BEAT THE VICTOR MILK COOLER LINE

- Level-Load Milk Coolers . . . The Finest, Newest and Easiest to use or sell.
- Standard Milk Coolers . . . For many years the standard of the industry.
- Drop-In Milk Coolers—Economic, practical and very efficient.
- Dry Storage Coolers . . . Unsurpassed in operating efficiency.

All in a variety of sizes.

Where Wasn't Any Place for It Hospital Air Cooling Equipment Goes Atop Roof To Conserve Space

FREMONT, Neb.—When the board of the Dodge county hospital here decided to air condition its two operating rooms, they found that the hospital was a masterpiece of compactness.

There just wasn't any place to put the air conditioning equipment inside the hospital. There was an equipment room between the two operating rooms, but the board did not feel it advisable to move out operating equipment to put in air conditioning machinery.

Fortunately the hospital has two wings—one of two stories and the other of three. The operating rooms were located on the upper floor of the three-story section adjacent to the roof of the two-story building wing.

So the Rump Plumbing and Heating Co., local firm hired to do the job, installed a Trane reciprocating condensing unit on the roof right outside the equipment room window.

This location was selected in order not to obscure the light to the operating rooms. The compressor was completely covered with a box that contained rain tight louvers. The louvers admitted sufficient air for the compressor to operate properly, however.

Next to the compressor a Trane direct expansion cooling coil was set up with a Trane centrifugal fan. This, too, was protected from the weather while louvers permitted a full supply of outside air.

Ductwork brings the conditioned outside air through the equipment room into the operating rooms. Only space lost in the equipment room is at the ceiling where the ductwork was furred in. Outlets on walls adjacent to the furred-in space direct the cool air into the conditioned spaces.

Coil and air velocity of the fan were selected so that the air can be delivered at 50% r.h. or above at all times without adding moisture. This arrangement provides proper temperatures in the operating rooms and also prevents anesthetic explosions due to static electricity.

Sanitary Refrigerator Elects A. B. Bechaud to Board of Directors

FOND DU LAC, Wis.—Henry H. Uihlein, president and general manager of Sanitary Refrigerator Co., has announced the election of A. B. Bechaud as a member of the board of directors.

Other officers of the company include: Herman A. Uihlein, vice president; F. J. Bommer, vice president; as well as H. B. Miller, secretary-treasurer.

Bechaud, as vice president at Ben-Hur Mfg. Co., Milwaukee, has been largely responsible for developing the Ben-Hur line of farm and home freezers.

The Sanitary Refrigerator Co. has been a manufacturer of refrigerators for over 50 years. They currently produce a line of refrigerators for home and trailer coaches, as well as a complete line of "Quickfreez" farm and home freezers.

Bevco Names Representatives To Serve 2 Territories

ST. LOUIS—The Bevco Co., Inc. here, manufacturer of electric beverage coolers and coin-controlled vending machines, has announced the appointment of two additional district representatives.

They are George M. O'Neil Co., Inc., New York City, and Jess W. Brewbaker, Roanoke, Va. The O'Neil Co. will supervise Bevco sales in New England and New York, while Brewbaker was named district sales manager in Virginia, West Virginia, Maryland, Delaware, and Washington, D. C.

Netherlands Firm Seeking To Export Refrigeration Equipment

WASHINGTON, D. C.—C. Van Vliet, representing Grasso's, Ltd., 's-Hertogenbosch, the Netherlands, has informed the U. S. Department of Commerce that he is interested in exporting cooling, refrigerating, and freezing plants, and refrigeration compressors.

'Junior' Salesman Knows His Lines at Ripe Old Age of 4 He's Only Been Selling For 1 Year--But Listen To His Technique

DEARBORN, Mich.—"How much does this air-handling unit cost?" a contractor asks Jack L. Kramer over the phone.

"This model lists for \$795," Jack replies.

"And when can we get delivery?"

"Oh, in about one week."

That's a typical conversation that can be heard in the office of John J. Kramer & Associates, manufacturers' representative here. It perhaps isn't surprising since Jack joined the organization four years ago. However, he wasn't permitted to start selling refrigeration and air conditioning equipment until he had learned the lines thoroughly. That was last year.

Now this junior sales executive sets quite a pace. He's still young enough to have plenty of drive and energy. As a matter of fact, he's only four (4) years old.

HE HAS ALL THE ANSWERS

Occasionally a customer who knows Jack personally will call him at home and ask if a certain make of equipment he sells is any good. To see him take his own sales catalogs and cover the details is a show in itself.

He has most of the answers right on the tip of his tongue, too.



LEFT: "Let me see those figures," says 4-year-old Jack Kramer, who knows nearly as much about his father's lines (and the competition) as many a grown-up salesman.

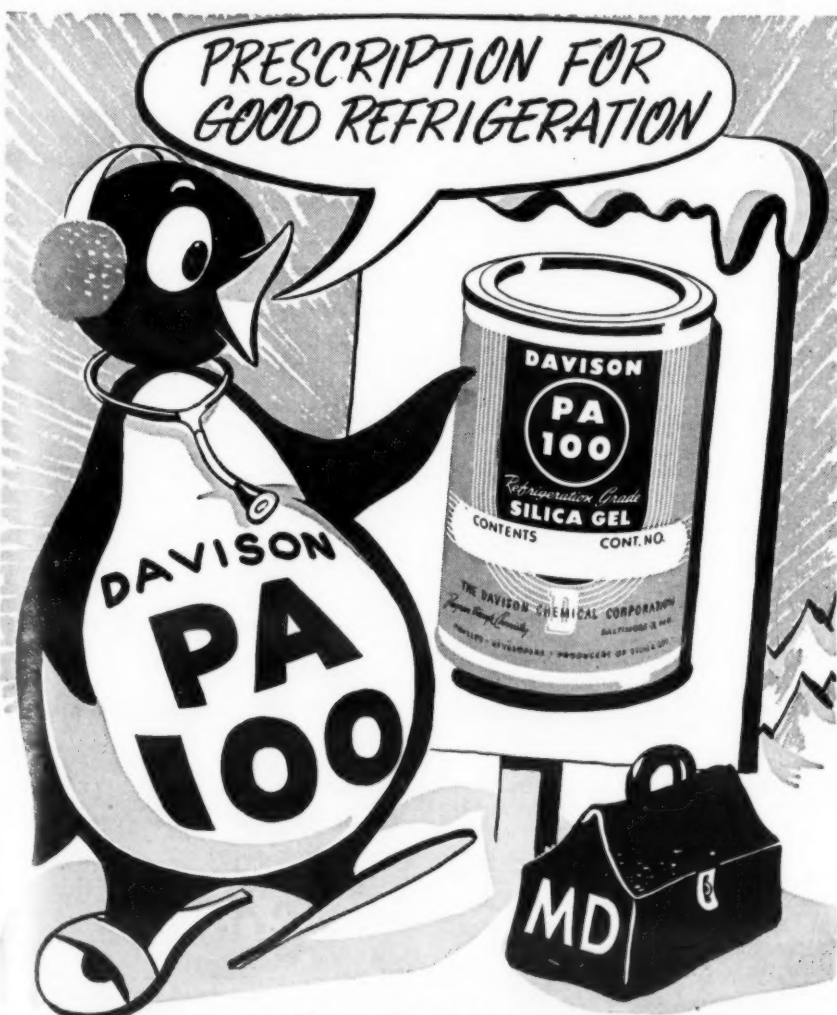
BELOW: "Delivery? Oh, it'll take one week on that unit."

And if the customer asks him to price a job, he digs through the catalog data and price sheets jotting down figures on the handy scratch pad until he comes up with the answer, which is usually right.

LEARNING GEOGRAPHY, TOO

"One of his greatest enjoyments," say his parents, "is to open up AIR CONDITIONING & REFRIGERATION NEWS when it arrives and go through it from cover to cover reading off all the trade names of the equipment illustrated. He's also learning geography by reading the names of cities and states mentioned in the news articles."

(Editor's comment: How many salesmen, of any age, know their own products?)



Moisture free refrigeration can be yours if you use PA-100. Tests prove PA-100 can dry refrigerants to moisture levels that cannot be reached by other refrigerant drying agents. And PA-100 cannot cause corrosion... actually helps prevent it by removing corrosive compounds from the system.

There need be no worry about caking, dusting, deliquescing or channeling refrigerants with PA-100.

Prescribe PA-100 for your moisture problems. Available from your jobber in cartridge or bulk can.

Progress through Chemistry

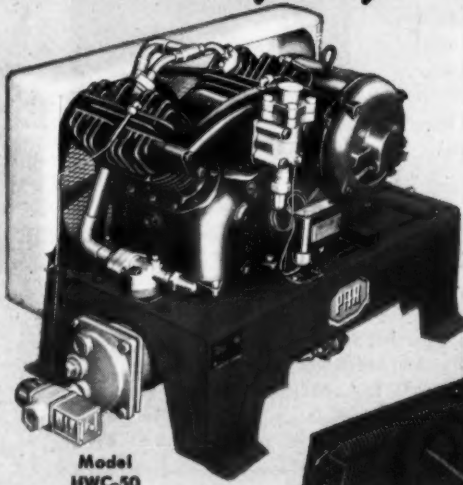
THE DAVISON CHEMICAL CORPORATION

Baltimore 3, Maryland

PRODUCERS OF: CATALYSTS, INORGANIC ACIDS, SUPERPHOSPHATES, PHOSPHATE ROCK, SILICA GELS, SILICOFLOURIDES AND FERTILIZERS

*Modern testing
methods assure...*

PAR and PARmETIC
B.T.U. Capacity Ratings are Always Right!



Model HWC-50

PARmETIC Model PM-O



Lynch modern Calorimeter tests establish accurately PAR and PARmETIC B.T.U. Capacity ratings as advertised!

When you buy PAR or PARmETIC, you're sure the B.T.U. ratings are right—and that the Units will give trouble-free dependable performance.

PAR conventional condensing units, air-cooled 1/6 to 3 H.P., water-cooled 1/2 to 15 H.P., Combination air and water 1/2 to 3 H.P. PARmETIC sealed units from 1/8 to 1/3 H.P.

BY COMPARISON—YOU'LL BUY PAR and PARmETIC



PAR AIR COMPRESSORS



PAR REFRIGERATION COMPRESSORS



WRAF-O-MATIC CANDY & COOKIE WRAPPING MACHINES



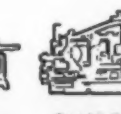
MORPAC PAPER PACKAGING MACHINES



MORPAC BUTTER & OLEO PACKAGING MACHINES



MORPAC GLASS FORMING MACHINES



MORPAC GLASS FORMING MACHINES



MORPAC GLASS FORMING MACHINES



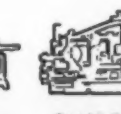
MORPAC GLASS FORMING MACHINES



MORPAC GLASS FORMING MACHINES



MORPAC GLASS FORMING MACHINES



MORPAC GLASS FORMING MACHINES



MORPAC GLASS FORMING MACHINES

'Neighborhood News' TV Show Plugs Local Appliance Dealers, Gets Free Publicity

PITTSBURGH—Increased dealer promotional activity and widespread publicity are being achieved by a local appliance distributor through sponsorship of a television news program which features a particular community each day.

The program, televised by WDTV, is staged by the distributor, C. R. Rogers Corp., in cooperation with 20 weekly newspapers in the area. It is called "Neighborhood News."

A three-minute round-up of headline news and five minutes of community news are presented on each program. Community personalities are interviewed and still pictures shown.

Cooperating weeklies provide the community news for the programs. The papers take turns supplying stories, with each participating about once a month. A blown-up masthead of the "weekly of the day" is placed in front of the announcer, who mentions several times that that paper furnished the news.

Similarly, the dealer in the featured community is promoted as the "key dealer of the day." This offers the dealer a splendid opportunity for extra promotion. Most dealers tie in with the program, since it has been found that the majority of viewers watch the program spotlighting their own community.

Each day, advertisements in the radio-TV sections of the three Pittsburgh metropolitan newspapers announce the name of the community to be featured the following day.

Publicity given the program by the weekly newspapers has been "tremendous," according to J. Milnor Roberts, Jr., account executive of Sykes Advertising, Inc., creator of "Neighborhood News."

"It is a continuous proposition," he said, "because every time a paper is scheduled to appear, appropriate news items are carried. With two exceptions, all of these stories appeared on page one. It would be impossible to buy this type of publicity at any price."

G-E's Magnetic Door Is Casualty of Defense Plan

BRIDGEPORT, Conn.—Why isn't General Electric making a magnetic door refrigerator any more?

The answer to that is simple, the company told its dealers recently. The magnetic force that held the steel door closed was created by a series of many powerful Alnico permanent magnets located inside the Koroseal gasket that lined the refrigerator door.

This Alnico, developed by General Electric engineers, is composed of aluminum, nickel, and cobalt—all of which are scarce metals needed in the defense production program.

The company said that as soon as these metals were available for civilian production again, the magnetic door model would return to the line.

Hotpoint Seeking High Appliance Output Along With Defense Work

CHICAGO—Hotpoint, Inc. expects that its military production next year and for a few years longer will take 20% of its total production capacity, with 80% being devoted to appliance manufacture, James J. Nance, president, declared recently.

"But," Nance asserted, "if that relationship has to go from 20-80 to 50-50 or anything else, we think we will be flexible enough to make the change without too much impact on either total production or total employment."

Hotpoint expects to be in production on its turbo supercharger defense contract before the end of this year and on its jet contract by the second quarter of 1952, according to Nance.

The jet engines will be turned out in the new 1,000,000-sq. ft. plant nearing completion in Cicero. The company has this plant earmarked for refrigerator production at some future date. It is located right across the street from Hotpoint's range plant.

Hotpoint, which had only two plants in 1947 and now has nine, elected to concentrate all its facilities in the Chicago area. Nance pointed out that the grouping of new plants in the same area and expansion of its line of products has enabled the company to shift workers among plants and products in order to avoid or minimize changes in the total working force to lessen the hardships.



Room Coolers Are Part of the Plan

COMPLETELY MODERN SOLUTION to the hot weather problem is found in a recent installation of 24 Mitchell 1/4-ton room air conditioners in the Langford apartments at Winter Park, Fla.

From both sides of the wall this installation is outstanding in the manner in which it has been made a part of the architecture of the building. Units are cleverly concealed from the outside with only small vents giving any indication of their existence. This is achieved by having the air conditioners extend into the stairwell which is in back of each apartment. On the inside the units are built into an alcove provided in every room which has a decorative what-not shelf above.

NPA Appeals Board Grants Subcontractor Exhibits Additional Materials to 3 Scheduled for 5 Cities Appliance Manufacturers

WASHINGTON, D. C.—The appeals board of the National Production Authority during the second quarter granted measures of relief from NPA regulations to three appliance manufacturers.

The three were the Automatic Washer Co. of Newton, Iowa; the A-B Stove Co. of Battle Creek, Mich.; and Taco Heaters, Inc. of Providence, R. I. In all cases, the NPA industry division had turned down their applications for relief or granted insufficient relief before the appeals were made.

Automatic Washer Co. pleaded that its base period use of steel was abnormally low because of adverse market conditions and an extensive reorganization of operations due to illness in management. It asked that its permitted use of steel be doubled in order to keep its labor force intact until production on a defense project starts in the near future.

The board gave the company an additional month's quota of steel.

A-B Stove Co. argued that a six-week long strike and a three-week interruption of production to relocate plant facilities chopped its base period use of iron and steel to less than 25% of normal. It asked that a new base period figure 150% greater than the one established be permitted.

The industry division had allowed a 135% increase and the appeals board upped this 10% when the company still claimed "unreasonable hardship."

Taco Heaters, Inc., which is making water heaters and heating devices for defense housing projects, won the right to exchange a surplus of copper foundry products, caused by elimination of a product from the company's line, for needed copper mill products.

N.O. Nelson Co. Purchases Beall Bros. Supply In Ill.

ST. LOUIS—Announcement has been made by Leo J. Bachle, president of N. O. Nelson Co., of the purchase of the assets and merchandise of Beall Bros. Supply Co. at Alton and Marion, Ill.

Both locations will operate under the N. O. Nelson Co. name. S. R. Griffin has been named manager at Alton, and I. C. Nelson, manager at Marion.

With the addition of the two branches, the wholesale firm now operates 17 offices and warehouses.

Summer Furniture Mart Date Set for June 16-26

CHICAGO — The 1952 summer furniture market will be held June 16-26 as originally scheduled, it was announced by C. E. Helgran, chairman of the Market Dates Committee.

Helgran pointed out that with the Republicans meeting in Chicago the week of July 8 and the Democrats the week of July 23, there will be no conflict with the dates originally set.

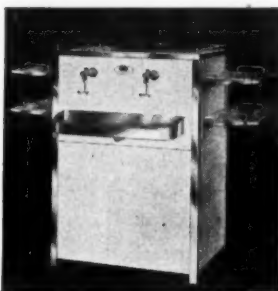
for all water cooling use *Filtrine*
—sell more condensing units

"DO Rating" Orders are Vital . . .

All Federal Agencies . . . Air Force . . . Army . . . Navy . . . Marine Corps . . . know that Filtrine products meet government specifications.

COOLERS FOR MESS HALLS — CAFETERIAS

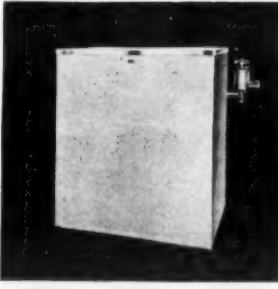
Sell your own condensing unit . . . with coolers backed by Filtrine's 40-year dependability. 1. Government and general acceptance for high efficiency—dependability—20-year life construction. 2. High capacity—super storage. 3. Handsome exterior (all stainless steel or Duco with stainless trim). 4. Equipped to suit with top and/or side shelves. 5. Bubblers, glass-fillers, front, back or all sides. 6. Can be "Taste-Master" equipped to banish chlorine and insure sparkling water.



MC-14-S MC-25-S
MC-43-S MC-40-S

COOLERS FOR X-RAY & PHOTOGRAPHY

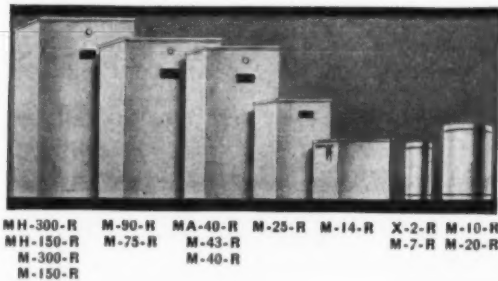
Sell your own condensing unit . . . with these Filtrine coolers pre-approved by military and V.A. medical procurement offices, Signal Corps, Air Force, etc., for X-Ray darkroom and photo-lab installation. 1. Dependable water of correct temperature for film processing. 2. Large storage for heavy duty and emergency requirements. 3. High efficiency, economy operation—20-year life construction. 4. Floor mounted with stainless steel work-table top; also under-counter models. 5. Filters (extra) prevent scratched and pinholed negatives.



PH-7 PH-14 PH-25

REMOTE COOLERS FOR ALL USES

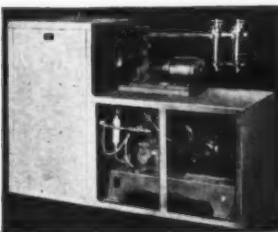
Sell your own condensing unit . . . with Filtrine coolers suitable for new and replacement installation everywhere: barracks, military depots, mills, schools, post offices. 1. Capacities 5-800 g.p.h.—storage 7-300 gallons. 2. High efficiency—20-year life-span. 3. Insulation—2" hydrolene-sealed corkboard. 4. Filters and Rectifiers/Dechlorinators available for all sizes.



MH-300-R M-90-R MA-40-R M-25-R M-14-R X-2-R M-10-R
MH-150-R M-75-R M-43-R M-40-R M-7-R M-20-R
M-300-R M-150-R

PACKAGED CIRCULATING CHILLED WATER SYSTEMS

Sell your own condensing unit . . . with complete Filtrine systems for circulating drinking water in offices, hospitals, industrial plants . . . for processing water as low as 34°. 1. Completely packaged for streamlined engineering, quick installation. 2. Capacities 5 to 400 g.p.h.—Storage 5 to 150 gallons. 3. Equipped with heavy-duty pump. 4. Your condensing unit factory installed. 5. Insulation—2-inch hydrolene-sealed corkboard. 6. 20-year life construction. 7. Filter-Rectifier assembly (extra) to kill chlorine and keep water sparkling.



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3 to 20 TONS

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794 Union Street, Brooklyn, N. Y.



SELF-SERVICE meat cases at the C. F. Smith superette in Detroit. Packaging room is shown in the rear.

Superette Succeeds

Pre-Packaged Meats Sell In Neighborhood Said To Be Death for Self-Serve Operation

HAZEL PARK, Mich.—Among recent market installations engineered by Jentzen-Miller Co. here are two for the local chain operated by C. F. Smith Co. that have aroused considerable attention in the trade.

For many years a successful operator of small neighborhood stores in the Detroit area, the Smith company has embarked on a modernization program. Most of the work is being done by Jentzen-Miller, distributor for Tyler and Weber cases and Carrier air conditioning. The firm also has extensive shop facilities for the manufacture of shelving, coolers, and conveyor checkout stands.

Newest of the C. F. Smith stores in the area (No. 396) is a small 50 by 100-ft. "superette" that features a self-service pre-packaged meat department. It's located in a neighborhood that is supposed to be "death for self-service meats," according to Max Miller, an official of Jentzen-Miller.

Yet, "our newest and finest store" is "our top volume superette," declares Burt Hart, president of the Smith chain.

"The sales records being set by this new market have exceeded our fondest expectations. Much of the credit for this remarkable showing

goes to Jentzen-Miller Co.," Hart adds.

Self-service meats are displayed and sold in 30 ft. of Tyler open cases which are equipped with sliding, clear glass doors for rear loading. Meat pre-packaging room is located directly behind the cases so the customers have a complete view of the packaging room. Meat department runs across the rear of the store.

In addition to this equipment the store has 24 ft. of Tyler open dairy cases and 16 ft. of Tyler self-defrosting frozen food cases. Other equipment supplied by the contractor includes 40 ft. of produce cases, 24 ft. of bakery display, plus shelving, gondolas, and checkstands.

The new superette is also air conditioned by means of an 8-ton Carrier package unit.

Other Smith store most recently engineered by the same firm is much larger, being a full-size supermarket and is located in Birmingham, Mich., a northern Detroit suburb. This, too, has a self-service meat operation and is completely air conditioned.

Jentzen-Miller, which was organized in 1946, specializes in supermarket engineering, explains Miller, who is secretary of the firm. Roy Stevens is president, S. Jentzen and A. Chaitman, vice presidents.

Vegetable Display Hint...

Paper Under Those Sensitive to Cold Allows Display In Refrigerated Cabinet

BILOXI, Miss.—An idea developed by Mrs. A. M. Gilch, owner of the Foodland Supermarket here, enables her to display vegetables sensitive to cold in the same refrigerated cases as other fruits and vegetables that need refrigeration.

For displays of wax beans, okra, avocado pears, and string beans—all of which would suffer from near-freezing temperatures—she first places several layers of heavy wrapping paper in the case and then stacks her display on top.

In this way she is able to keep these items adjacent to lettuce, carrots, and other ingredients suggestive of cool salads for hot, humid summer days.

To more equally distribute the re-

frigerating effect, she shifts the displays twice daily, moving vegetables that had been on top to the bottom and vice versa.

Mrs. Gilch declared that since she had her \$1,300 refrigerated produce case installed, her fresh produce business has increased by 50%. She expects that the case will amortize itself in less than three years.

Other advantages gained by purchasing the case are a cut in spoilage losses from 5 to 8% down to less than one half of one per cent, a more eye-appealing display, ability to carry a larger inventory, and preparation of vegetables for immediate table service. The latter has been a big hit with her customers and a principal reason for the rise in sales.

Refrigerated Truck Lets Wyo. Comm. Move More Fish with Less Bruising

CHEYENNE, Wyo.—The latest in refrigerated fish distribution units is boasted by the Wyoming Game and Fish Commission, now that two new fish trucks have been put into operation.

Warden A. F. C. Greene pointed out that these units have a number of improved features which make them much more practical than the trucks previously used.

The two units are built around two-ton, cab-over-motor trucks which are capable of hauling the great weight of water and fish in a fully-loaded truck over any of the state's mountain roads. Each truck is equipped with dual wheels in the rear and extra Browning gears to add power in emergencies.

The all-steel units have a capacity of about 1,200 gals. of water. This makes it possible to haul 500 lbs. of one-pound trout or 375 lbs. (4,500 fish) of six-inch trout for over 400 miles without ill effects on the fish, according to the warden.

The truck tank is divided into compartments by four movable baffle plates, each of which has perpendicular fins. The function of these plates is to cut down the movement and sloshing of water, thus preventing bruising of the fish.

A refrigeration unit is mounted at the front end of each tank. It sits over the intakes to the pumps and cools the water before it is pumped back into the tank. The cooler the water the greater the amount of

oxygen that can be held by it, Warden Greene explained.

Addition of the new distribution units is partially in preparation for the greatly increased production of comparatively large trout from two new rearing stations now under construction, the warden said, and partially because of the need for more efficient equipment to carry out the policy of planting large-size fish wherever possible and assuring the best possible distribution.

New Facilities, Expansions Announced by U.S. Army

WASHINGTON, D. C.—Plans to establish an Ordnance Small Arms Ammunition Center in St. Louis have been announced by the Army.

It was also announced that the Army Engineers have set up a Snow, Ice, and Permafrost Research Headquarters at Wilmette, Ill., and that a \$2,481,000 expansion of facilities has been started at Burlington Air Force Base, Burlington, Vt.

Anchor Names MacCleary

PITTSBURGH—Dale MacCleary has been appointed southern district manager, according to S. I. Lasner, vice president of Anchor Distributing Co. here.

MacCleary will travel northeastern West Virginia and western Maryland.

ICE CREAM SIGNS

Reminder Slogans at Cabinet Boost Self-Serve Sales

BADEN, Mo.—Packaged ice cream sales have been boosted by about one third at the Baden Supermarket here by the use of two chromium sign stands on each side of the store's two self-service ice cream display cabinets.

Positioned near the check-out stands so that customers can see them just before they leave, the signs do a good job of attracting customer attention to the ice cream display, according to R. E. Bode, store operator.

The signs are changed daily for variety and consist of reminder slogans such as "Ice Cream Is a Family Affair," "Eliminate Cooking—Serve Ice Cream and Cookies for Lunch," and "A Lot of Energy at a Low Price."

Gov't List Gives 200 Small Business Experts

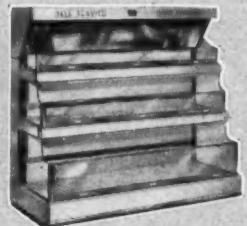
WASHINGTON, D. C.—The Department of Defense has announced the availability of a complete list of names and addresses of more than 200 full-time small business specialists who have been appointed by the Army at installations throughout the country.

The specialists will aid small business firms interested in learning how they may participate in the military procurement program.

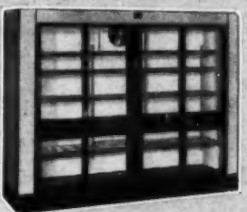
Also available are lists of specialists appointed by the Air Force and the Navy.



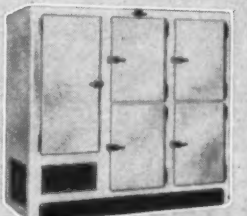
MODEL 1407. Self-service frozen food display case. Attracts and handles more buyers, invites more sales.



MODEL 306. The sensational open case with THREE refrigerated shelves. For profit-making impulse sales.



MODEL 3508. Wall Type Display Case. For self-service display of dairy products or beverages.



MODEL 3865. A 65-cu. ft. reach-in refrigerator. One of the four popular Koch reach-in cabinets.

THE QUALITY REFRIGERATOR LINE



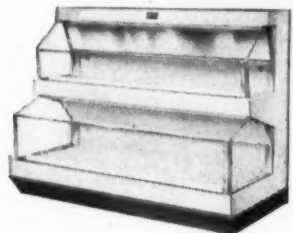
MODEL 6710. 10 ft. long open front case with extra wide display shelf. Ideal for produce display.



SERIES 3100. Endless top display cases, 7 and 10 ft. long. Set up in any length for profit displays.

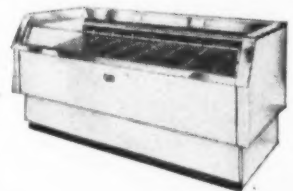
WIN friends

and influence your customers with a new KOCH two shelf Dairy Case. 12 feet of refrigerated shelving in a compact 6-ft. case that can easily "Daily Double" your self-service sales. Extra roomy—100% visibility—mirror back—properly sized for wall and island displays.



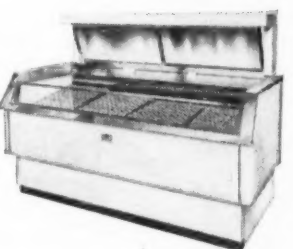
PLACE this

new KOCH self-service Meat Display Case where you want your heaviest traffic...to sell MORE packaged meats to MORE modern customers. Service from the rear won't interfere with the parade of buyers in front. 7 and 10-ft. models. Removable ends for continuous display.



SHOW twice

as much with a mirror back! Just add the KOCH Salesman canopy top to the display case above and get off to a faster start. Add bright lights and sliding mirrors that also permit service from the rear.



THREE WINNERS out of KOCH to parlay into faster, bigger profits! Write today for the latest tip sheets on these!

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REFRIGERATORS

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TAKE ADVANTAGE of DEVALUATION



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ALL VOLTAGES



Now available for the trade at keen prices either with body and starting relay only or complete, ready for immediate installation as depicted above, the "LECOMETIC" suitable for ambient temperatures up to 110° F.

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Turn to "What's New" Page for
useful information on new products.

How To Keep Good Salesmen

Bonuses, Sales Meetings, Prospect-Protection,
Help Dealer Keep Salesmen Satisfied

BALTIMORE—"A leading problem with appliance firms today is the sales help situation. Sometimes the salesman you hire is not aggressive. Or if you do develop a good salesman, he may leave you. If an appliance organization can develop a good salesman and then hold on to him, it will have overcome a very important problem."

That's the view of George S. Gardiner, president of Modern Appliance Co. here, who is attempting to solve this problem with a program involving bonuses for sales of selected merchandise, regular sales meetings, prospect-protection and floor-time arrangements, and a promotional campaign.

"Even with today's existing market conditions, it is vitally important that a retail organization maintain its sales force," Gardiner commented in describing his approach to this matter. "It's true that shortages in certain lines may induce a retailer to think less in terms of stimulated selling. But appliance dealers must maintain their outside contacts."

"A good sales force is also important for the future of the firm. It builds goodwill, sound merchandising, and helps to lay the groundwork for increased sales when merchandise will be even more plentiful."

"Outside salesmen, to many firms, are the connecting link between their

merchandise and their customers. In such cases, a good salesman's program will pay off in large dividends."

Although located on a traffic street, Modern Appliance must still rely on its salesmen for the greater portion of its business. About 60% of the firm's business is brought in by salesmen, with the remainder resulting from regular promotional campaigns.

The store's bonus plan can be illustrated by a recent "deal" that helped to step up the dollar sale of refrigerators. For a period of four weeks, the store offered all salesmen a \$10 bonus and above-regular commissions for every refrigerator of over 8 cu. ft. that was sold.

"We don't have much trouble in selling models up to 8-cu. ft.," explained Gardiner, "because of the smaller houses and apartments that many people are living in. But we did notice a slackening of sales in larger models. This may have been due to Regulation W, or maybe our salesmen worked on the smaller models because they have greater appeal."

"In either case, it was the larger models we wanted to sell, and we paid this bonus as an added incentive."

Not only did the salesmen get the added bonus for the sale of larger models, but the increased sales gave them a larger commission. Thus, the



NO CLOCK-WATCHING HERE, servicemen as well as salesmen get bonuses for extra calls. That is one way Modern Appliance in Baltimore keeps its men happy in their jobs and producing at high rate.

salesman had a double reason for pushing the bigger refrigerators.

During another four-week period, the store was interested in reducing its stock of smaller models of home freezers. So a promotion was started around the smaller freezers.

Every Saturday morning the firm holds a sales meeting. Gardiner feels that no matter how small or large a sales staff, such meetings are important. For one thing, he says, they give salesmen a feeling of importance, let him know that he's part of an organization. And these sessions give salesmen an opportunity to air their problems and to get helpful sales advice.

"At every meeting," Gardiner pointed out, "we usually have a distributor, his salesman, or a manufacturer's representative present. They discuss their particular merchandise and give our salesmen helpful sales pointers. It makes the meeting interesting and holds salesmen's attention."

SALESMEN FEEL THEY BELONG

"If salesmen are handled loosely, not instructed or given an opportunity to air their problems, the result may be a lost salesman. Salesmen must know and feel that they are part of your organization and there is nothing better than a meeting to accomplish this."

Modern Appliance has six regular salesmen. Because of the large area covered by the store, no assigned areas are given to any salesmen. But in order to protect salesmen when they do have a prospect, the store asks them to file a "protection card."

This card lists the prospect's name and address, date contacted, and appliance interested in. Salesmen must hand in subsequent reports as the prospect is followed up.

Gardiner keeps track of the protection cards himself and checks them regularly. Depending on what the salesmen report on further visits, Gardiner may make suggestions, offer to have another salesman try to "close" the sale, or make a visit

to the prospect himself. But the salesman is protected on commissions at all times.

Salesmen are also given "floor time."

"We know that salesmen do not like to be kept out on the street all the time, particularly when they are hitting some hard situations that depress them," the dealer stated. "To offset this, we let them spend several hours a week on the floor and they get regular sales commissions on all appliances sold in the store."

The store has a regular promotional campaign that provides its salesmen with definite leads. The store is continually working with manufacturers on the cooperative advertising and receives great benefits. Direct mail is also used, but only after conferring with salesmen. They are asked to suggest what neighborhoods or sections should be covered by particular mailings.

One of the big points made by salesmen is that the firm can service whatever it sells. The company has four repair trucks in operation.

"We do not go out looking for service work," Gardiner said, "but only take care of our own. When customers know that we are working exclusively on a customer basis, they know that they can always depend upon us for prompt service."

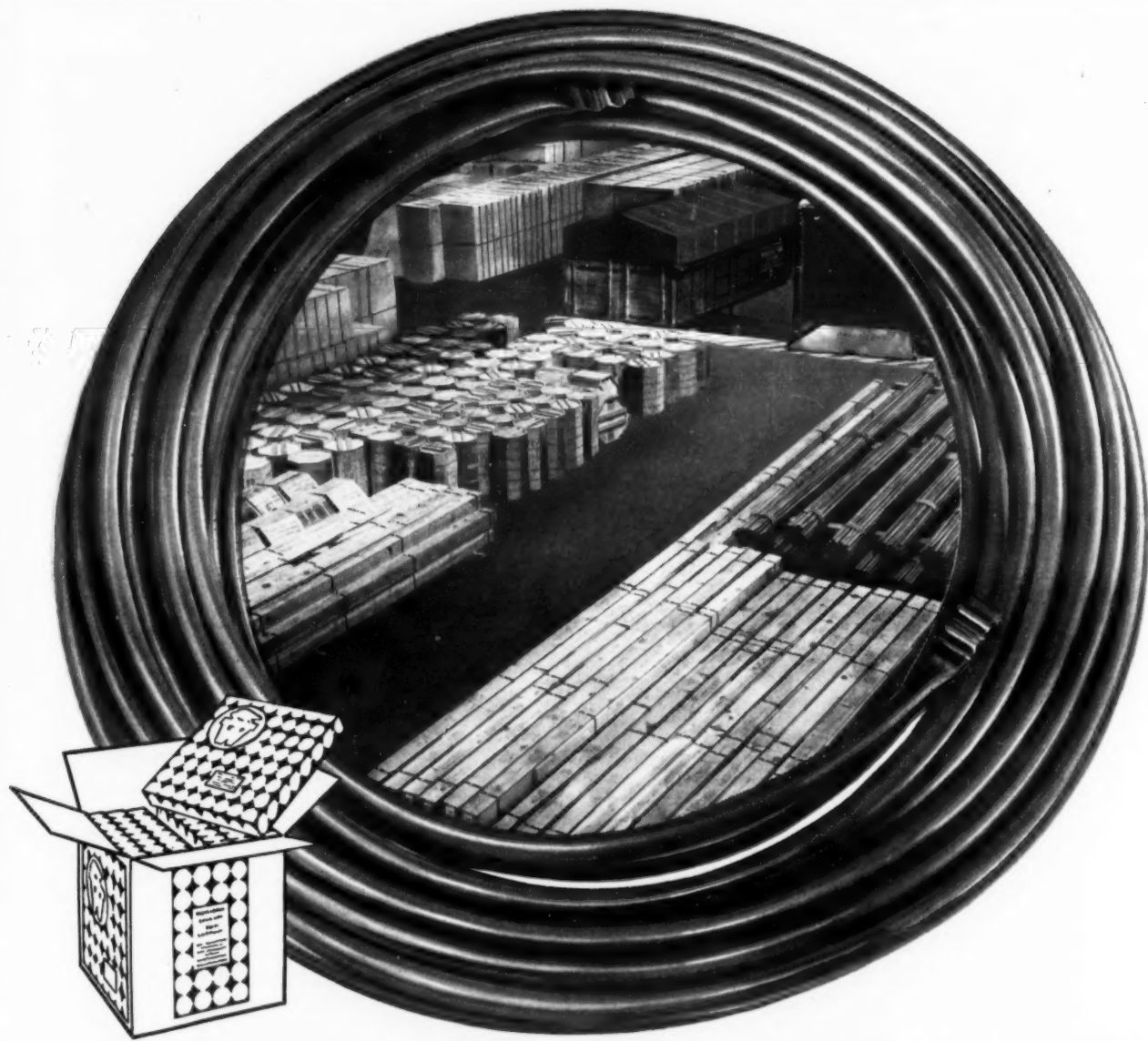
SERVICEMEN GET BONUSES, TOO

As are the salesmen, servicemen also are offered bonuses—to keep them happy with their jobs and producing at a high rate.

Repair men are expected to make at least eight calls a day. For every call over eight, they receive \$1.75 per call. Thus, repairmen do not waste too much time at any one stop.

This situation also takes care of the firm's over-time problems, since extra calls mean extra income.

"Our servicemen do their work well," Gardiner stated, "for they know that should they have to return to a certain job because it wasn't well done, they will not be reimbursed for that call."



Every wholesaler and his salesmen should know how PACKING and SHIPPING affects refrigeration tube

Packing and shipping operations are on equal footing with any of the manufacturing phases of Wolverine tube. The extra care involved pays off in customer satisfaction.

Strong cardboard cartons protect Wolverine copper refrigeration tube from possible damage and keep the product clean and dry. Packed this way, and shipped in a large master carton, the coiled tube is easy to store, easy to

identify, and easy to reship. And, your customers appreciate these same advantages in shipments from your warehouse to their places of business.

Write for a copy of Wolverine's Flow Chart. WOLVERINE TUBE DIVISION, Calumet & Hecla Consolidated Copper Co., Incorporated, Manufacturers of Seamless, Non-Ferrous Tubing, 1413 CENTRAL AVENUE, DETROIT 9, MICHIGAN.

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Refrigerated Canned Goods

TRRF Develops Kayan Chart To Combat Condensation When Canned Goods Are Removed from Cold Storage

COLORADO SPRINGS, Colo.—Increasing use of refrigeration with its numerous advantages for the storage of canned goods likewise offers some problems, points out the Refrigeration Research Foundation here.

Refrigeration does reduce the rate of reactions between chemicals of the contents and metal of the can, as well as maintaining the nutritive values of the foods, but the surface condensation which may occur when the canned goods are removed from the cold storage to a higher temperature is not desirable, TRRF points out.

"Water that condenses on external surfaces may cause rusting of metals, may mar appearance and salability of others, or might provide excellent opportunity for growth of molds and bacteria on cases or packages, or on exposed surfaces of commodities," explained TRRF.

This condensation can be avoided if care is taken when removing the canned goods from refrigerated storage. If the humidity of the room they're taken to is low enough, no condensation will occur. To assist warehousemen in determining these facts, the accompanying chart was developed for TRRF by Prof. Carl F. Kayan of Columbia University.

"As use of cold storage expands,

there may be wider and greater demand for avoidance of condensation on goods stored, regardless of type of package used," emphasizes TRRF.

"Products like candies, which can be stored beneficially at low temperature and distributed and sold at higher temperature, may be coming to refrigerated storages in larger quantities. Certain dehydrated or concentrated foods might require similar treatment. Metallic packages and others of similar protective quality may be used advantageously with low-temperature storage to effect maximum protection during storage periods."

How to use the Kayan chart to prevent sweating is explained by TRRF as follows:

"1. Measurement of the surface temperature of the cans or other packages. This temperature is obtained by placing an ordinary thermometer in a position so that the bulb is in contact with surfaces of two cans within a case. This temperature should be located on the horizontal scale along the base of the Kayan chart.

"2. Looking above [on the chart] we can observe all the points at which a vertical line extended above this point would intersect the various diagonal lines that indicate relative

humidities. On the vertical scale on the left side we see the temperatures of the rooms or other areas which, in combination with corresponding relative humidities, would be safe for goods. In these circumstances the goods could warm up to the various temperatures without condensation.

"3. The relative humidity of the air in the area to which the goods are to be moved must be known. This measurement must be made with a reliable psychrometer, consisting essentially of a wet-bulb and dry-bulb thermometer mounted together and a chart that gives you the various relative humidities of air at various temperatures for various wet-bulb depressions (differences between wet-bulb and dry-bulb).

"Some storage operations are using more elaborate psychrometers than the well-known sling psychrometers. A rapid movement of air past the bulbs is necessary and this air must not have been warmed even slightly by body heat or other heat. Distilled water is used to wet the covering of the wet bulb."

The example shown on the chart here involves moving stored goods from a room where they were kept at 41.5° F. to a room of 75° F. The chart shows that to avoid condensation, the relative humidity of the second room must not be above 30%.

Possibility of allowing goods to

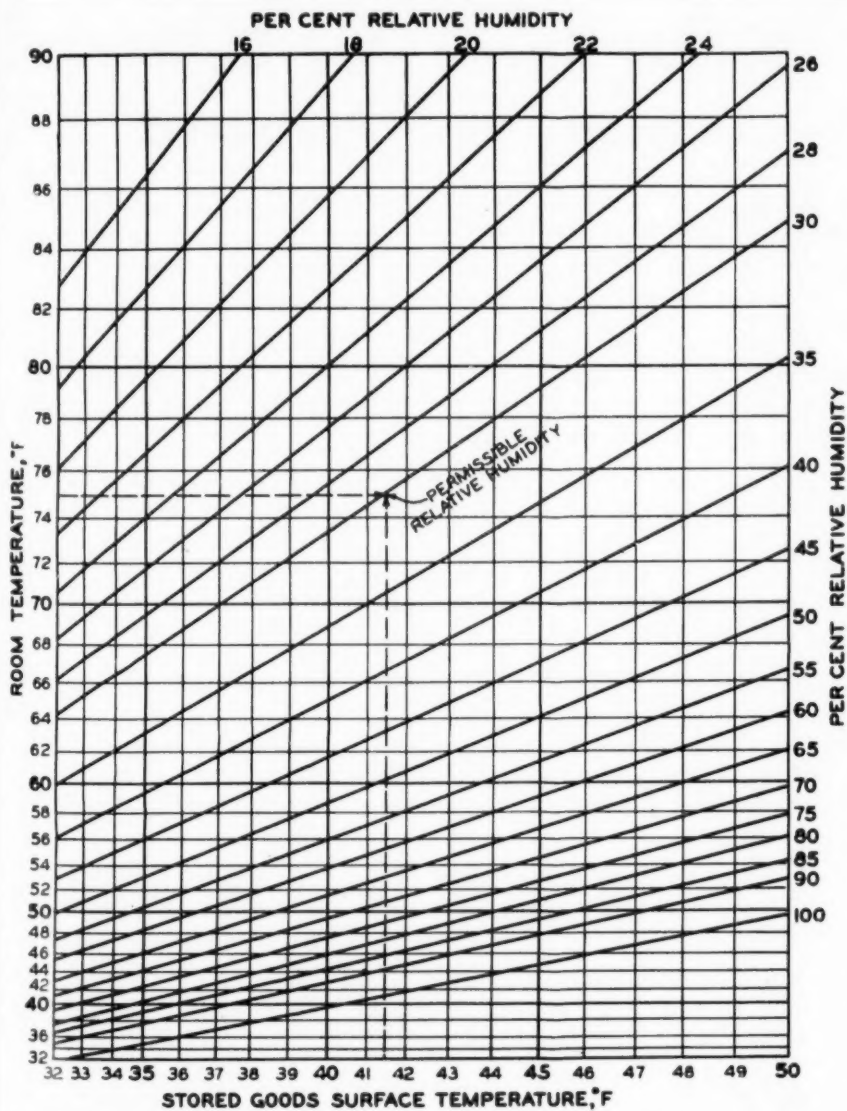


Dehumidifier Helps Rescue Rare Books

IN JUNE, A FIRE in the library of the Ohio State Archaeological and Historical Museum, Columbus, endangered thousands of rare books, state papers, and priceless collections of old letters and newspapers. Great quantities of water were used by firemen to keep losses at a minimum. On the job, removing water from the valuable collections and stopping mold and mildew damage, is one of the 20 Oasis Air Driers which were rushed to the museum. The driers are still being used in temporary drying rooms and in the four-story stacks of the library.

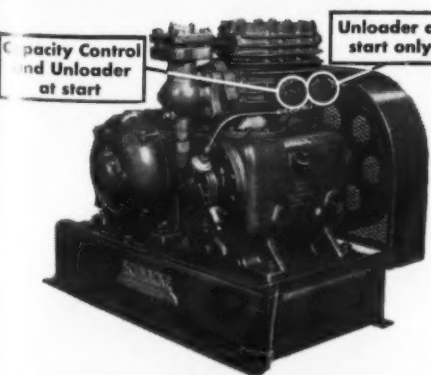
warm up in rooms where they have been stored "may be practical and economical," TRRF suggests, adding that "size and density will affect the rate of warming. Several stages and several days may be required in some cases.

"A rule-of-thumb procedure developed in our candy investigations is to move the product temperature upward in stages of not more than 15° F. maximum temperature difference between product and conditioning room temperature."



KAYAN CHART shows what the relative humidity of a room should be to avoid surface condensation on canned goods being moved from cold storage to non-refrigerated room.

SCHNACKE COMPRESSORS feature Unloaded Starting or Capacity Control



The most adaptable control available—unloaded starting only—or for capacity control and unloaded starting just as required for the job. Self-contained, no outside controls, solenoids, or wiring.

as required for the job . . .

For applications requiring cylinder unloading for capacity control or starting—Schnacke provides a versatile control designed to fit the job exactly. This device is applied to each cylinder as ordered, for either unloaded start only, or as capacity control and unloaded starting, and priced accordingly—not a flat extra charge. It is not included if you do not need it and you pay only for the actual control ordered.

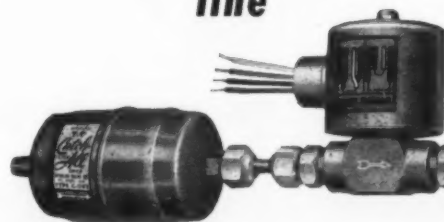
Schnacke recommends THERMATROL capacity control for simplest of operation and trouble free performance.

Compressors and Condensing Unit 5 H.P. to 60 H.P.

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for **PEAK PERFORMANCE** on all installations . . . buy **Sporlan** right down the line



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Do You Have 'Both Feet On The Ground'?

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NEW Cross-Flo POSITIVELY THE MOST EFFICIENT DRIER-FILTER MADE!

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—Charles A. Dana.

Dollars Saved Are Dollars Gained--and Protected

Throughout the refrigeration, air conditioning, electric manufacturing, appliance, and utility industries an interesting drive to defeat inflation is in progress. Everybody should wish it well, because it will remove dollars from the competitive buying arena.

This "drive" is a person-to-person Payroll Savings campaign. Involving up to a million workers, it is described by Government publicity agents as "one of the widest industrial drives ever made for the sale of Defense Bonds."

Said project is directed by an outstanding executive who is known—at least by name—to practically everyone in the industries concerned. He is James J. Nance, president of Hotpoint, Inc. His appointment to head up the campaign has been announced by Martin W. Clement, chairman of the Industrial Advisory Committee to the United States Treasury.

Mr. Nance was inspired to take on this patriotic job by the remarkable response of Hotpoint employees to his sponsorship of the Payroll Savings Plan. His own colleagues and factory workers stepped up their participation in the Plan from 8.2% to 96.2% after he lent his presence, personality, and energies to the program.

Campaigner Nance kicked off his greatly enlarged nationwide "drive" at a meeting of presidents of many companies within the electrical appliance and utility fields. Later, each cooperating executive developed a promotion program patterned along the lines of Mr. Nance's successful campaign within the Hotpoint organization.

Sparkplug Nance hopes that every major manufacturer in our related industries will back the drive 100%. He also hopes that every worker will take part to the best of his ability.

Why? Well, the most important reason is that employees will be putting their dollars to work for the defense of their country. "Defense" is just as much their job as it is that of our troops who are once again fighting to resist the aggression of Communist satellites.

As U. S. Government spokesmen have said: "When you buy Defense Bonds you are backing up our boys in uniform by helping them keep America strong."

At the same time that Payroll Savings Plan participants are helping their country, they are helping themselves. Payroll deductions afford a sure, convenient method of saving money. You save before you have a chance to spend. And you save regularly. Furthermore, Defense Bonds are said to be "as safe as America."

Sure, when the bonds mature they may not buy as much as the same dollars would now. On the other hand, the same money invested in stocks or real estate might return fewer dollars. Furthermore, money not invested systematically may not be spent at all.

Best part of the deal is that the more people buy bonds, the less likely is the chance that their dollars will be devalued.

Jim Nance has undertaken another tough job. Let's help him enlist thousands of savers in the fight to prevent further inflation!



SUMMER'S ARRIVAL is hailed by manager John S. Martin (left) and owner Ben B. Bodne (right) of New York's famed Algonquin hotel as a York room air conditioner is turned on in one of the hotel's guest rooms. During the winter the units are stored. Over 75% of the hotel's rooms are air conditioned with these efficient small coolers.

Mortgageless Hotel Cooling

Room Conditioners Used In Guest Rooms To Save Expensive Structural Changes

NEW YORK CITY—"Last July when the thermometer climbed up high in the 90's, when all the roads leading to the beaches were gorged with traffic and hotel managers were helplessly watching a very real 20th century Exodus, we were actually turning clients away right at the door," reflected John S. Martin, manager of The Algonquin, famed Manhattan theatrical hotel.

Word had gotten around town pretty fast to tourists and the commuter who occasionally stays the night in town rather than making the long trek home after an evening at the theater, that the Algonquin was cool, cool, cool.

"We haven't taken out mortgages nor gotten into difficulties with the banks to make air conditioning possible," Martin said. "But we were among the first to realize that air conditioning was a must, and if we were to remain competitive with newer hotels we had to have it. And we did."

CENTRAL SYSTEM TOO COSTLY

Because of the hotel's architectural features, a large central station air conditioning system was not possible without radically altering important structural features of the building. This would have entailed a spectacular outlay of money and burdensome obligations.

Like all hotel managements, John Martin was interested in operating his hotel at a profit, and keeping his patrons from hurrying off to wide open spaces when the city's temperatures soared. Single unit room air conditioners seemed to be the most practical answer for his problem.

As a test, a dozen York room air

conditioners were initially installed back in 1949, and those rooms immediately made available to guests at a slightly higher rate. Their effectiveness and success can be measured by the fact that today over 75% of the Algonquin's rooms are individually air conditioned!

PACKAGED UNITS USED

The Algonquin's public rooms are kept clean, cool, and comfortable all year by three packaged York air conditioning systems totaling 35 hp. These units distribute dehumidified cool, clean air to the lobby, dining rooms, and cocktail lounge. Ben B. Bodne, the hotel's new owner, claims that unit air conditioning is actually a small investment for the gratifying returns.

Bodne, who entered the hotel business quite by accident—he was actually visiting New York to purchase a baseball team when the Algonquin came on the market—is a firm believer, as is John Martin, that more air conditioned rooms made available to guests in city hotels throughout the country, the hotel business would be a good deal healthier during the summer season and provide a more substantial year-round return.

But it's not only the tourist who seeks out the Algonquin when he comes vacationing in New York during the summer season. The hotel's reservation clerks get swamped with requests for air conditioned rooms from the city's cliff dwellers who are unable to get out of town when the humidity is of pea soup density.

"If only I could get one good night away from this heat," is the not infrequent wall heard at the desk, "then I might be able to turn in a day's work at the office."

Air Conditioning Month

Lehigh Valley Distributors and Dealers Support Cooperative Campaign To Sell Advantages to the Public

BETHLEHEM, Pa.—June was air conditioning month in the Lehigh Valley. For the first time, local air conditioning dealers and distributors got together and supported a concerted campaign to sell the advantages of air conditioning to the public.

Under the leadership of R. E. Reppert, commercial supervisor of the Lehigh division of the Pennsylvania Power & Light Co., some 20 dealers and distributors cooperated in sponsoring a cooperative advertising campaign under the slogan "June is Air Conditioning Month."

The advertising consisted of a center spread institutional advertisement that covered about one third of each of two facing pages. The remaining space beside and below the institutional advertisement was taken by individual dealer and distributor advertising.

On the page immediately preceding this spread appeared a supporting advertisement by the utility, additional dealer advertising, and a feature story under the headline "June is Air Conditioning Month" that explained just what air conditioning does.

The campaign slogan appeared at the top of all the larger dealer advertisements. The smaller ones used the phrase "Air Condition Now."

The institution advertisement was headed by two cartoons. One cartoon

showed a sweltering man drooping before an ineffectual fan. It was captioned: "Some people think of air conditioning only in terms of circulation."

The other cartoon showed an overheated fellow by an open window, tugging at his collar. The caption on this one read: "Some people think of air conditioning only in terms of ventilation."

Below the cartoons a prominent box explained: "But real honest-to-goodness air conditioning tempers, dehumidifies, cleans, circulates, and ventilates the air. Only air conditioning performs all of these five functions and only when you have all five of these do you have real air conditioning." Each of the five functions was briefly explained.

Copy then explained why air conditioning is a must for stores, restaurants, offices, and such other commercial establishments as banks, funeral homes, bowling alleys, theaters, hospitals, laboratories, churches, and lodges and clubs. This was done through a series of line drawings to illustrate each reason.

Under the "must for stores," for instance, reasons given and illustrated were: "Reduces the summer slump, offers competitive advantage, reduces losses and mark-downs due to spoilage, makes customers linger longer, brings in new customers, reduces cleaning and decorating, makes

employees more efficient, and keeps merchandise cleaner, fresher."

The advertisement ended on this note: "... And these benefits apply to air conditioning for your home or a single room. ... See your dealer."

Reppert explained that the cooperative campaign was carried in three local newspapers, the *Morning Call* and *Evening Chronicle* in Allentown, and the *Bethlehem Globe-Times*.

He said the institutional advertisement was paid for on a prorated basis to all dealers. Individual advertisements were at the dealer's discretion as to type and size.

The three newspapers have a 105,000 circulation covering the entire Lehigh Valley area.

Redmond
MICROMOTORS

Prompt shipment!

74 different models in stock

FACTORY DISTRIBUTORS

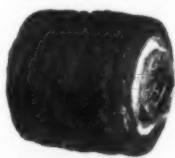
CYCLO-FREEZ CORP.

2120 S. Lyndale, Dept. A, Mpls. 5, Minn.

RIGID TESTS PROVE A-P's BEST!



A-P TRAPDRI units are available in five sizes; capacities from 1/2 ton to 5 tons. Two largest sizes are refillable.



HERE'S WHY

- Unique filter element in A-P TRAPDRI Units actually removes all foreign matter and particles as small as 5 microns. (See illustration)
- A-P TRAPDRI Units contain nothing which can dissolve or otherwise enter into and impair the refrigeration system.
- Unique "depth filtration" gives you many times more filtering and absorbing capacity than ordinary strainers and filters.
- Equal to 900 mesh screen, without any measurable pressure drop occurring with ordinary, less effective filter and drier units.



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AIR CONDITIONING INSTALLED HERE



The Duncan-Hines-approved Coffee Shop at Arlington, Virginia, uses two Frick

refrigerating units also keep proper temperatures in four cold storage boxes—for fruits, vegetables and meats. Installation by Harvey W. Hottel, Inc., Frick Distributors in Washington, D. C.

There's a Frick system of the size and type to meet the cooling needs of YOUR business. Get estimates now.



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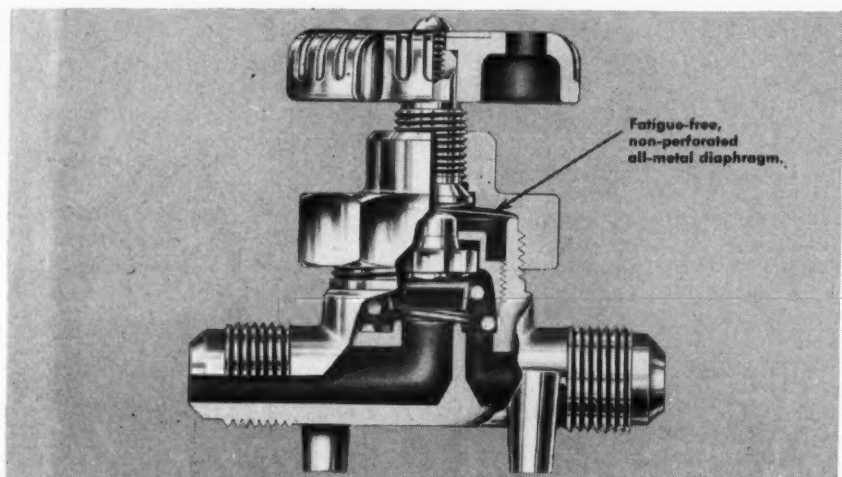
One of Two Frick Unit Air Conditioners at Evans Coffee Shop

Want Better Diaphragm Performance?

Get
KEROTEST
Original
DIAPHRAGM PACKLESS
LINE VALVES

Check these
"Extra Value" Features

- ✓1. FULL FLOW—maximum volume and pressure.
- ✓2. SELF-ADJUSTING—self-compensating "floating" disc.
- ✓3. POSITIVE SHUT-OFF—seals flow without forcing.
- ✓4. LEAK-LOK BONNET SEAL—assures leak-proof bonnet joint.
- ✓5. REPACKS IN USE—positive back-sealing.
- ✓6. TEMPERATURE-PROOF—withstands soldering, never develops porosity.



Always Extra Value at No Extra Cost
SEE YOUR KEROTEST WHOLESALER
Manufactured Exclusively by
KEROTEST MANUFACTURING CO. PITTSBURGH 22, PENNSYLVANIA

Planned Market Job Cuts Costs

New Goldblatt Markets Show How Pre-Installation Plans
Reduced Material and Labor Costs, Helped Speed Work

CHICAGO—Two new supermarkets opened recently by Goldblatt Bros., Inc., operator of department stores here, are excellent examples of what can be accomplished by planning the store completely in advance of construction.

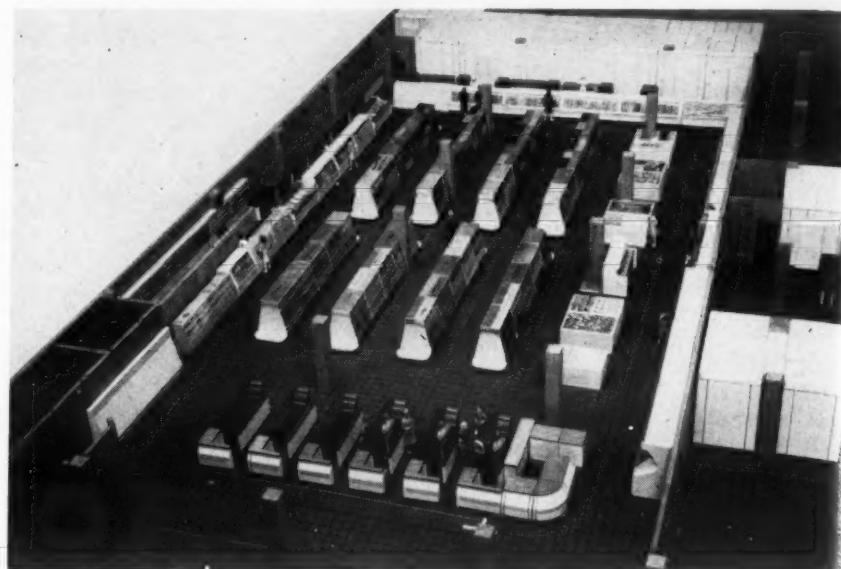
That's the opinion of I. W. Shell, head of Lee Shell Co., Hill distributor, who handled both installations, and it's shared by officials of Goldblatt's, too.

"Sales in the new stores are running about 20% ahead of comparable markets," says Herman A. Gumenick, merchandise manager of Goldblatt's food division, which has 12 markets with complete food operations and four with limited food sales.

The manager of the newest store, Joseph J. Borssuk, likewise says he's pleased with results.

"Many grocers," says Shell, "make the mistake of first putting up the building and then trying to fit the fixtures into it. This is the expensive way to do it. If I were to open a store myself, I could save at least \$5,000 through intelligent planning in advance."

"Not only is it important to plan the layout of fixtures with the assistance and guidance of merchandising men and store engineers so the best possible merchandising job can be done, but it's equally important to have electrical, plumbing, and re-



LONG BEFORE construction had started, the food department of Goldblatt Bros.' new Pulaski-Madison store in Chicago had been carefully planned by Lee Shell Co., Hill distributor, as this model layout shows. Advance engineering produced a better store at less cost.

frigerant lines properly located.

"By careful planning in advance you have the plumbing and drain lines where you want them, electrical service outlets are where they're needed, and the refrigerant lines can be safely and neatly installed."

"In the new Goldblatt stores drains, electrical outlets, clean-out basins were automatically provided right where they were needed, and there was no digging through the expensive marbelite floor."

CONDUIT FOR TUBING

Refrigerant tubing was run through the floor, but wasn't installed until after the floor was laid. What was done was to install conduits for the tubing by laying 5-in. tile in the sub-flooring as it was poured. When it came time to install the refrigeration equipment the tubing was simply pushed through the tile.

"This makes a very clean job and saves a lot of money because this way it isn't necessary to break up the floor to run the lines," Shell points out.

Intelligent planning like this also permits a better scheduling of the actual installation, Shell says.

"In fact, we were ready with our end of it three weeks before the rest of the work in the stores was ready for us."

The two markets themselves are interesting. One occupies an area 137 ft. long by 125 ft. wide in the basement of Goldblatt's ultra-modern new store on the west side of Chicago at the corner of W. Madison Ave. and Pulaski Rd. The other market is in a separate building next door to the firm's department store at Lincoln and Belmont Aves.

These two jobs represent the largest complete store contracts ever handled by the Lee Shell Co. Both are almost identical in design and layout so a description of the Madison-Pulaski store will also apply generally to the other market.

EIGHT PRE-FAB COOLERS USED

Considerable refrigeration is involved in a market of this size. A total of 18 Hill compressors, including one self-contained unit is required in the Madison-Pulaski store, serving eight pre-fabricated walk-in coolers and 23 cases of various types and sizes.

Six of the pre-fab coolers run across the back of the store. One is a 10 by 16-ft. cooler for delicatessen items. Directly in front of this is a 7 by 12-ft. freezer. Adjoining these is a 15 by 22-ft. meat cooler with a

door into a refrigerated cutting room that measures 15 by 18 ft. At the extreme right is a 9 by 10-ft. fish cooler, and behind this is the fish freezer, 6 by 10 ft. in size.

The other two walk-in coolers are located on the right-hand side behind the market area proper. One is an 8 by 12-ft. cooler for dairy products, the other a 12 by 14-ft. walk-in for vegetables.

Meat cases are in the rear of the market just in front of the six coolers, six cases comprising the long row. From left to right are four Hill 60CM 9½-ft. service meat cases, a 60CF 9½-ft. fish case, and a 30CF 11-ft. fish case.

Condensing units handling the six meat and fish cases, and the six walk-ins are located in an area beside the fish cooler and freezer at the extreme right rear.

A 1-hp. water-cooled unit cools three of the meat cases while a ¾-hp. water-cooled unit serves the fourth meat case and the two fish cases.

The delicatessen walk-in is cooled by a 1-hp. water-cooled unit; the meat cooler by a 5-hp. unit; the cutting room by a 2-hp. machine; the fish cooler by a ¾-hp. unit; the meat freezer and fish freezer by 1-hp. and ¾-hp. air and water-cooled units, respectively.

There's a long line-up of dairy, frozen food, and vegetable cases on the right side of the market in the Madison-Pulaski market. One continuous row consists of five 6-ft. 33SS open dairy cases and two 82FF 7-ft. frozen food cases. Following a break for the doorway to the dairy and vegetable preparation area behind the cases is a row of three 55VR 11-ft. refrigerated vegetable cases.

High sides for these cases and the two coolers on this side are located just off the vegetable preparation area. A 2-hp. unit takes care of three dairy cases while the other two are powered by a 1½-hp. machine. The two frozen food cases are refrigerated by a 2-hp. unit; the three produce cases by a 3-hp. machine.

A ¾-hp. unit serves the dairy cooler; a 1½ the vegetable cooler.

Near the cases on this side is the self-contained 82XIC ice cream case.

Another long line-up of cases in on the left side of the store. It includes two 41DR 8½-ft. self-serve meat cases; three 60D 8-ft. service meat cases; an 80P 6-ft. 8-in. refrigerated pastry case; and four unrefrigerated cases for baked goods.

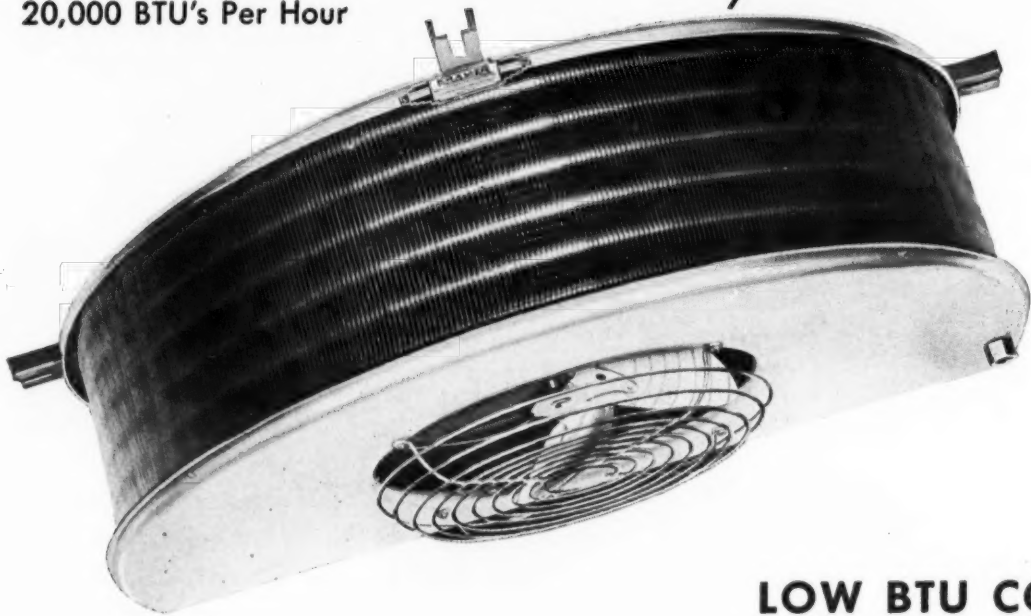
The three service meat cases here are connected to a 1-hp. unit, the two open meat cases to a 1-hp. machine, and a ½-hp. unit handles the refrigerated pastry case.

CURVETTE

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850 BTU's to
20,000 BTU's Per Hour



LOW BTU COST

SAVES SPACE

The unique designs take no storage space.
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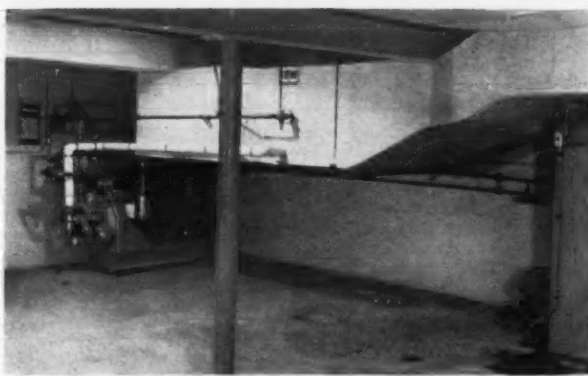
Refrigeration Units WANTED

Desire to purchase 1/8 to 1-HP Sealed or Open type; standard brands; Complete condensing units; Also motors, controls, valves, etc. Give full details.

HARWOODE EXPORT CO.
31 E. 4 Street, New York 3, N. Y.



GENERAL OFFICE of Auto Forwarding (which trucks new Packards from the factory to dealers throughout the country) is modern in appearance and fully air conditioned.



NEAT INSTALLATION marks the 10-ton year-round central system designed by Davis Air Conditioning Co. to cool and heat the new offices of Auto Forwarding.

Owner Has One Complaint:

Cooling System Is 'Working Too Good; Visitors Come and Won't Go Away'

By C. Dale Mericle

DETROIT—"It's working too good. Visitors come and won't go away."

That's a fine compliment for an air conditioning contractor to receive from a customer. In this case the tribute came from H. L. Zenzius, president of Auto Forwarding Co., in commenting on the installation made in the firm's modern new building by Bill Davis of Davis Air Conditioning Co.

A 10-ton year-round system had been installed by Davis to provide both summer cooling and winter heating for the offices of Auto Forwarding. Since 1927 this company has been hauling new automobiles from the auto center of the world—Detroit—to dealers throughout the country.

The firm hauls Packards almost exclusively, and in fact its lot, which will hold 600 new cars in addition to plenty of haulaway trailers, is adjacent to the Packard plant in Detroit.

When the firm last year decided it needed a new building of its own (it had leased space for years) it called in architect Earl W. Pellerin to design a modern structure that would go on the front of the lot. The architect, in turn, assigned the cooling and heating job to Davis.

Close cooperation between the air conditioning contractor, the architect, and the general contractor (Industrial Construction Co.) resulted in an attractive building with an air conditioning system that was neatly installed and has proved satisfactory to its owners.

A built-up central type 10-hp. system was laid out for the building, which has a frontage of 32 ft. and runs back 90 ft. Equipment, including the 10-ton Chrysler Airtemp radial condensing unit and the oil-fired Jackson & Church 400,000 B.t.u. furnace, are located in the basement which extends 38 ft. under the rear section of the one-story structure.

Cooling system is tied in with the furnace to utilize its blower. A four-row Aerofin coil is located in the return air plenum ahead of the furnace, air filters being on the upstream side of the coil, eliminators on the downstream side.

Riser from the furnace goes up through space provided between the toilets to ducts located between the acoustical tile ceiling and the roof.

Two main ducts are provided, the larger one extending to the front of the building, the smaller to the rear.

Type C-1 Anemostat ceiling outlets are employed throughout. There are two serving the 16 by 20-ft. office of Zenzius, the president, at the front of the building. There's one in the 10 by 14-ft. office of Paul Sipe, secretary-treasurer of the company, and one for the reception room. Five are provided for the general office area, which measures 30 by 40 ft. less a 12 by 18-ft. corner containing the toilets.

At the rear of the building is a 20 by 24-ft. personnel and claims office that requires two outlets. Outlets are also provided for the toilets and the 5 by 9-ft. glass-enclosed vestibule at the front entrance.

U.S. Company Contracts for Appliances, Conditioners To Be Built In Spain

WASHINGTON, D. C.—A 15-year renewable contract to manufacture electric refrigerators, air conditioning units, and a full line of home appliances on a royalty basis was recently concluded by a concern in Bilbao, Spain, and an "important" U. S. electrical company, the Department of Commerce reported.

The Bilbao company has been manufacturing refrigerators on a limited scale since 1947. However, the firm has now increased its capital and is in a position to increase its output, the Commerce department said.

Present plans are to produce 3,000 refrigerators and 500 air conditioning units of 2 to 10-ton capacity in the first full year of operation. Precision machinery for a new plant will be obtained from England and control equipment from the U. S.

Good Motor Co. Expands

ROCK HILL, S. C.—Featuring Kelvinator home appliances and Cool-a-Matic air conditioners, the Good Motor Co. here celebrated its big modernization and expansion program with an "open house" recently. Banks Good is president of the firm, and Basil Munn is general manager.

Molding Presses Make Possible Large Forms For Major Products

PITTSFIELD, Mass.—Complete refrigerator interiors, air conditioning housings, kitchen cabinets, and new-type fluorescent lighting fixtures molded in one piece from plastics may some day be rolling off production lines, it was forecast by General Electric chemical department officials.

This will be made possible by recent developments in injection molding presses, it was stated.

In anticipation of the coming trend for larger plastics parts, General Electric has installed a J & C pre-plasticizing injection press manufactured by the Jackson & Church Co. of Saginaw, Mich., at the General Electric molding plant in Decatur, Ill., it was announced.

Designed to produce plastics articles weighing up to 13 lbs., the press can be easily converted to produce much larger items. It is now in production on large refrigerator parts.

Weighing 135 tons and standing 27 ft. in height, the J & C press incorporates a new patented mechanism that gives accurate control of pressure being applied in the mold. This feature reportedly permits close control of product quality and flexibility in product design.


Pre-plasticizing equipment on the press enables the coloring and molding of certain types of plastics in one operation. Capacity, with polystyrene, is rated at 1,000 lbs. per hour on a continuing basis.



CEILING DIFFUSER in boss's office is checked for air delivery by Paul Sipe, secretary-treasurer, and Bill Davis, the air conditioning contractor.

Control of both the cooling and heating cycles is handled by Minneapolis-Honeywell thermostats located in the conditioned space.

As part of the installation Davis Air Conditioning buried a 2,000-gal. oil tank beyond the rear of the building. Duct insulation consisting of Fiberglas covered with canvas was applied by Parhams Insulation Co.



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and Backed by An
18-Months Guarantee!*

JE SOLENOID VALVES are made by the Jackes-Evans Mfg. Co. of St. Louis, manufacturers for 63 years of quality industrial products—many of a high-precision nature. In establishing the JE Controls Division, no expense or effort has been spared to equip the new factory with the most modern facilities for the job. **JE SOLENOID VALVES** have been scientifically developed and thoroughly tested in a complete research laboratory under the direction of competent engineers.

In short, **JE SOLENOID VALVES** are built to a standard to justify our unconditional 18-months guarantee.

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- ③ **Long Life** . . . Cool Coils
- ④ **Durability** . . . All corrosion-resistant materials
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May we submit samples for your test and approval? Write today for details.

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CONTROLS DIVISION
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REDUCED VOLTAGE STARTERS

For Squirrel-Cage Motors

Reduce starting current on your compressor circuits and prevent lamp flicker with Bulletin 640 or Bulletin 740 compression resistance starters. Ideal for network systems or where the power company imposes current limitations in starting large a-c motors. Write for bulletin, "Automatic Reduced Voltage Starters" containing complete information. Allen-Bradley Co., 1313 S. First Street, Milwaukee 4, Wis.

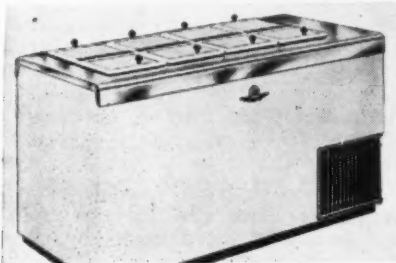


ALLEN-BRADLEY

MOTOR CONTROL

What's New

When requesting further information on new products, please use "Information Center" form.



Ace Features Advanced Styling In New Cabinets

KEY NO. A-730

NEW YORK CITY—"Advanced" styling and new constructional developments are announced features of Ace Cabinet Corp.'s model C-8-D ice cream storage cabinet.

The cabinet has eight holes accessible through interchangeable flip-flop-type lids. Lids have a special self-sealing snap-on collar which is replaceable.

The condensing unit "rolls out" for cleaning and servicing. Two grills and perforated kick-plate provide ventilation for the air-cooled motor.

The cabinet has six 5-gal. and four 2½-gal. containers, giving a total storage capacity of 40 gals. Dimensions are 62¼ in. long, 30¼ in. wide, and 32½ in. high.

Abbeon Dehumidifier Can Handle 8,000 Cu. Ft.



KEY NO. A-731

NEW YORK CITY—Abbeon Supply Co. here has introduced a new dehumidifier that will dehumidify any closed area of tight construction up to about 8,000 cu. ft.

The manufacturer stressed the compactness and portability of the model DMS-4, which measures 17 in. long, 13 in. wide, and 15½ in. high.

A plug-in appliance, it operates on the same principle as an electric refrigerator. Moisture soaked room air is drawn into the dehumidifier by a fan located inside the unit at the rate of 110 c.f.m.

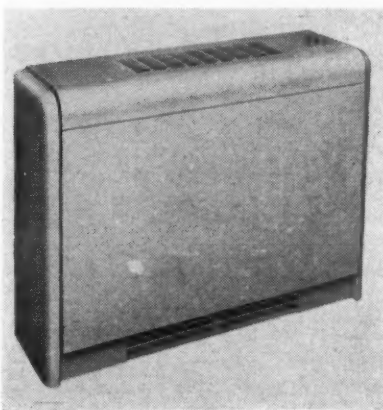
This air passes over refrigerated

aluminum coils where moisture is deposited to drip into a collection pan for removal. The pan may be emptied by hand about once a day or attached to a garden hose or copper pipe for automatic discharge through a floor drain, window, or sewer.

The dehumidifier weighs 55 lbs. and is powered by a hermetically sealed Tecumseh compressor. It is equipped with a permanently lubricated Redmond fan motor and finned copper tubing in the condenser. Power consumption is 115 volts, 60-cycle, 2 amps.

Finished on the outside in a baked crackle green, the dehumidifier is priced at \$149.50. Larger units are available if desired.

A plug-in control can also be furnished as an extra to maintain humidity at any desired percentage.



Year-Round Room Cooler Introduced by McQuay

KEY NO. A-732

MINNEAPOLIS—A year-round room air conditioning unit called the "Seasonmaker" is now being manufactured by McQuay, Inc., at its Faribault plant.

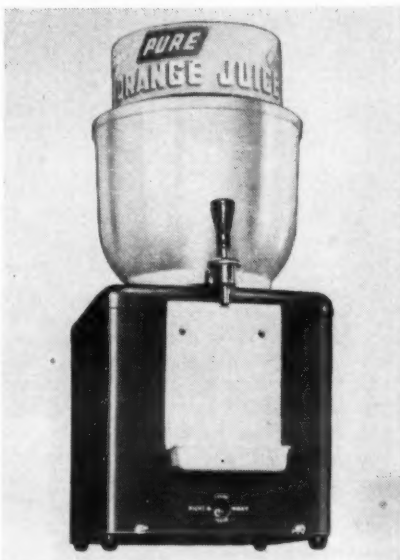
The unit is being produced in two models, a floor model for fully recessed or flush mounting and a ceiling model for suspended mounting. It is available in three basic sizes: 200, 400, and 600 c.f.m.

Fresh air may be supplied directly or through a central system.

Cabinets are made from prime quality steel and finished in baked grey hammerloy enamel, according to the company.

Both manual and automatic controls can be had.

Features claimed for the unit include compactness, attractive design, ease of installation and maintenance, noiseless operation, and individual control. These features are said to make the air conditioner "ideal" for multi-room buildings.



Pelco Juice Dispenser Features Eye-Appeal

KEY NO. A-733

BLOOMINGTON, Ill.—"Eye-appeal aplenty" is the feature of the new electric Pelco orange juice dispenser, announced recently by W. M. Caudell, Jr., sales manager for the Refrigeration Division of the Portable Elevator Mfg. Co. here.

The attractive "turn-a-top ad message," a Pelco original, serves as a constant "moving" invitation to "enjoy pure orange juice."

The Pelco juice dispenser features constant agitation for even juice mixture and a balanced refrigeration system for proper juice temperature, and was first introduced in the New York market by Morrow Bros., Inc., sales agent for the Pasco Packing Co. of Dade City, Fla.

The new dispenser is also treating users to a valuable saving of time.

Pocket Draft Gauge Designed for Testing Gas Burners



KEY NO. A-734

PITTSBURGH—A pocket draft gauge designed specifically for testing gas burners has been introduced recently by Bacharach Industrial Instrument Co. here under the trade name "Drafrite."

Drafrite is said to be capable of detecting even the slightest draft or pressure inside the furnace and over the burner. It can also be used to check the draft at the relief opening of the draft hood, the manufacturer states.

The instrument is carried in two parts, the gauge and the draft tube. To use, the draft tube is screwed into the back of the gauge.

For the "neutral pressure point" test—required for setting the neutral pressure point at the correct height in the furnace for proper combustion air adjustment and good operating efficiency of the burner—the

firing door is cracked open only slightly.

The slotted end of the draft tube projecting from the back of the Drafrite is pressed against this crack.

Moving the Drafrite alongside the crack up and down will quickly establish the exact location of the neutral pressure point. That is the point or plane where pressure in the furnace or boiler changes from negative to positive, according to Bacharach.

The location of this point is indicated by a zero gauge reading. Above this point, the gauge pointer will swing to the pressure side of zero and below this point to the draft side of zero.

The gauge has a magnification of more than 100 times, providing a sensitivity to detect pressure or draft which is equal to that of a match flame.

Pressure or draft of .001 in. of water is represented by a pointer movement of about 3½ in.

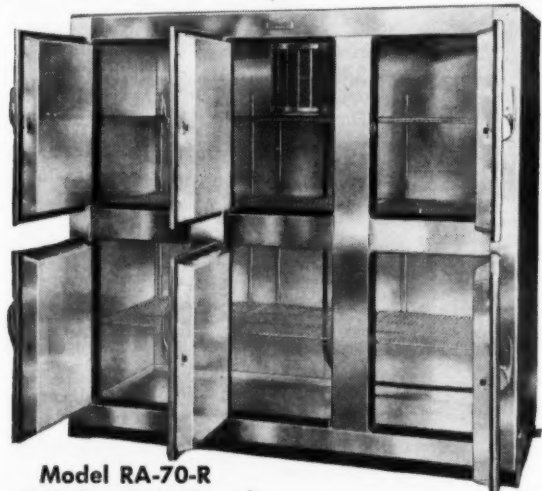
Zero position of the pointer is in the center of the scale so that any change from pressure to draft can be readily observed. The range of the instrument is .005 in. pressure to .005 in. draft.

USE THE COUPON!

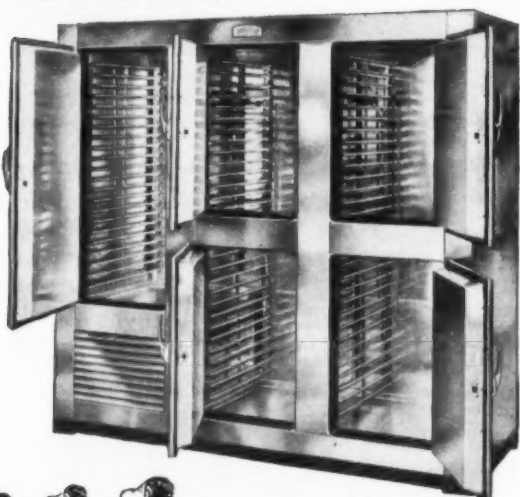
For "easy-to-get" product information . . . use coupon in the "Information Center" form.

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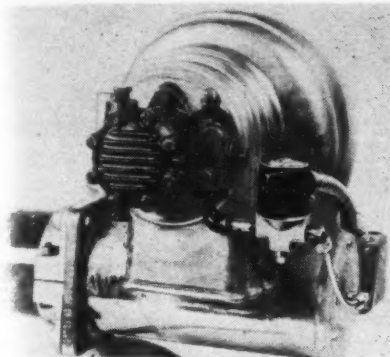
Lehigh Manufacturing Co.

DIVISION OF LEHIGH FOUNDRIES, INC. • Plant: LANCASTER, PA.

Export Department — 39 Broadway, New York 6, N. Y.

What's New (Cont.)

Valve Designed To Improve Oil Burner Operation



KEY NO. A-735

MINNEAPOLIS—A new valve which is claimed to materially improve the efficiency of oil burners has been announced by the Minneapolis-Honeywell Regulator Co.

Called the delayed opening oil valve, it eliminates most causes of sooting in oil-fired heating plants, and can be installed on most existing and all new high-pressure burners, K. L. Wilson, manager of the company's manufacturers' division said.

"In operation the valve acts somewhat as a policeman," he said, "and holds up the flow of oil to the burner nozzle until the proper air supply is available."

"As a result, the valve eliminates 'starting smoke,' prevents serious carbon formations on the nozzle and electrodes, and provides positive, dripless starts and stops of the fuel supply."

"Carbon formation in the combustion chamber and flue passages is minimized to the point that heating efficiency is appreciably improved."

Heart of the system is an electric resistor which delays the opening of the solenoid valve for about four seconds after the burner motor starts. This delay, Wilson explained, permits the burner fan to get up to speed before oil is discharged through the nozzle. As a result, the valve makes possible a clean fire start so that carbon deposits are held to a minimum.

The valve can be installed at any point between the fuel pump and the burner nozzle in a few minutes. Be-

cause the solenoid is spring loaded, the valve can be mounted in any position, and will close instantly when the power supply is shut off.

The power supply is connected in parallel with the burner motor, and the conduit opening can be moved to any position to make wiring connections accessible and quick.

The Honeywell official pointed out that the new valve has been extensively field-tested in hundreds of installations by burner manufacturers who asked to participate in the testing program.



Entire Area Radiates In New Picture Heater

KEY NO. A-736

NORTH HOLLYWOOD, Calif.—A new picture heater employing a new type of heating element that permits the entire surface of the picture to radiate heat has been developed by Electrofilm Corp. here for consumer test.

Use of the new heating element is said to permit production of a heater with maximum efficiency, yet with a surface temperature below 200° F. This reportedly eliminates any possibility of the heater igniting flimsy material or causing severe burns. In addition, the unit provides an even temperature radiation due to its expansive heating surface, according to the company.

The heater can be hung on the wall or set in a detachable base for use on the floor beside desk, crib, or chair.



Basement Tap Box Uses No Water for Sweet Bath

KEY NO. A-737

HUDSON, Wis.—Nor-Lake, Inc., here has announced a new model basement tap box.

The product is described as "a completely dry refrigeration cooling system with no water used for a sweet water bath."

The model is made in both 24 and 36-in. sizes. It has a stainless steel splash pan front and top. Pipe legs are adjustable to fit any bar height, and the front pan is removable to facilitate installation.

The box is equipped with a 150-c.f.m. fan and has a complete line of accessories, such as water faucets, tubing, and air distributors, according to the company.

Heater Prevents Valves In Washer from Freezing



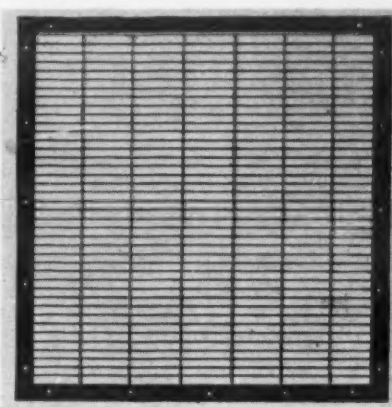
KEY NO. A-738

STILLWATER, Okla.—A heating element that will prevent freezing of the Dole valve on automatic washers when the washers are installed in garages, porches, or unheated rooms has been introduced by S. I. Denton, manager of the Denton Maytag Co. here.

The heater, called the Denton Valve Protector, when plugged into an electrical outlet, will keep the valve from freezing in temperatures below zero, Denton said.

It is made of tempered steel wire which will stand many times the heat required. The heating device pulls only 3 watts and can be installed in about five minutes. The unit is priced at \$3 prepaid parcel post to dealers.

Denton added that if the valve is slightly different, installation may be varied but the element must be touching the valve body.



Titus Introduces Grille For Heavy-Duty Jobs

KEY NO. A-739

WATERLOO, Iowa—Titus Mfg. Corp. is introducing a new, heavy-duty industrial air conditioning grille on the market that was first custom-manufactured for the Atomic Energy Commission.

This grille comes in two sections. The volume control part features solid-section Airfoil louvers. These louvers are streamlined to keep noise and turbulence to a minimum. Each blade is individually adjustable. In addition, the concealed louver support eliminates mullions and butted construction.

The grille face has 14-gauge steel blades, set on 3/4-in. centers. In addition, 14-gauge vertical support bars (steel) are placed on 6-in. centers. These give added strength.

Sixteen-gauge steel is used in the extra wide border of the grille face, it is explained.

Information Center

For more information on What's New products, current literature and catalogs available, equipment advertised in AIR CONDITIONING & REFRIGERATION NEWS use Key Numbers where designated or specify products advertised and we'll see that you receive this information promptly.

What's New or Current Literature Available

Key No. Key No.
Key No. Key No.
Key No. Key No.
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Products Advertised

(list name, page, and issue date)

(PLEASE PRINT PLAINLY)

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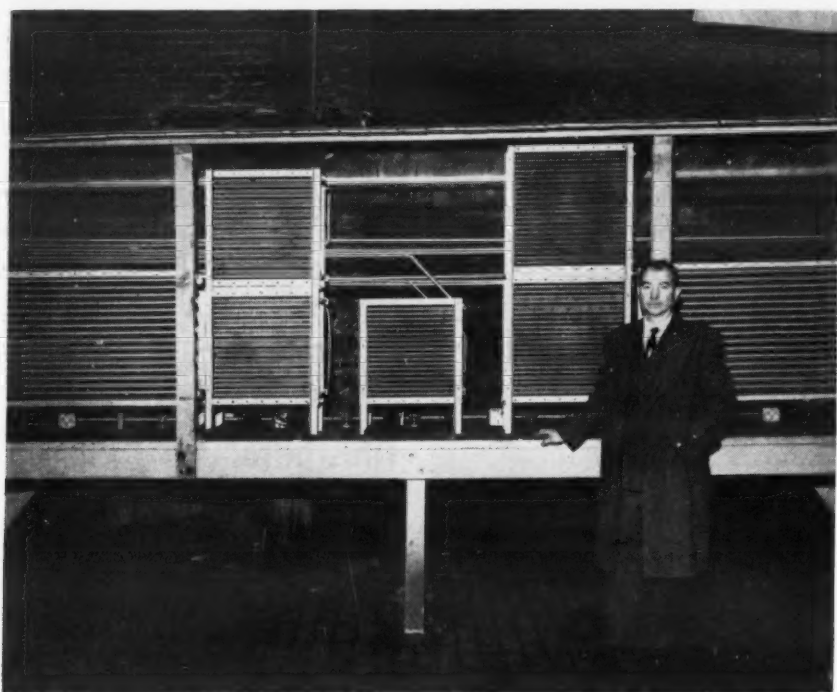
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Export Dept.: 39 Broadway, New York



USE OF WATER in its refrigeration system was eliminated by Schaller and Weber with this installation of Kramer-Trenton "Unicons." This move was necessitated by the New York City water shortage.

'Unicons' Solve Meat Retailer's Problems In Face of N.Y.'s Water Restrictions

NEW YORK CITY—New York City's water problem dictated a recent Kramer-Trenton Co. "Unicon" installation in the establishment of Schaller and Weber, meat retailers at 1654 Second Ave.

The Kramer "Unicon" installation for Schaller and Weber eliminated the use of water in a refrigeration and air conditioning installation having a total of 11½ hp.

Seven "Unicons" were installed by the Hub Refrigeration Service Co. here, for the complete air conditioning of the store, to provide a -30° freezer room, a 40° meat processing room, for two 36° walk-in refrigera-

tors, a 0° walk-in refrigerator, and for 38° display cases.

Conditions required the installation of the "Unicons" outside of the building on a brick foyer adjacent to the processing room. They are mounted on angle iron frames built up from a wooden platform structure, approximately four feet high. A shed was built over them to protect the units from the weather.

Each Kramer "Unicon" is equipped with a reverse acting pressurestat which requires each machine's pressure to reach 105 lbs. before the "Unicon" blower fans go into operation.

Concrete Dam In India To Get Cooling Off

SYRACUSE, N. Y. — Two big Carrier refrigeration machines will be shipped to India to "cool off" a huge concrete dam soon to be built near Bombay to double the city's water supply, it has been announced by Carrier Corp.'s International Division.

The dam will be 230 ft. high and nearly a third of a mile long, and will impound a lake of some 46 bil-

lion gals. The two centrifugal refrigeration machines will supply 1,600 gals. of chilled water a minute to prevent heat released by the hardening concrete from opening dangerous cracks in the structure.

The chilled water will be used in mixing the concrete, and will also be circulated through miles of piping buried in the concrete mass. It will take two years to cool the dam.

SLANTS on Service

"Slants on Service" is a new "package" devised by the NEWS to meet the needs of its busy readers in the service and contracting business.

Replace All Belts, Not Just One, on Multiple Drives

If a belt goes bad on a machine using two or more belts, be sure to replace all the belts, not just the one that went bad. Replacing just one belt would result in the new belt wearing out quickly.

Belts stretch somewhat in the course of their use, so one new belt on a multiple-sheave pulley would take all the strain and quickly wear out. Therefore, for a satisfactory job you must replace the whole set of belts. The serviceman can save the old belts that are in good shape for emergency spares.

Sharpened Putty Knife Removes Hinge Pin Safely

A sharpened putty knife will permit removing hinge pins from 1950 Westinghouse refrigerators without scratching the hinge and stud.

Push the putty knife blade between the stud and the hinge sleeve. By prying it a little the stud will come out without damaging the surface. The hinge pin can then be pushed out with another pin.

How To Remove Moisture From Commercial CO₂ Drums

Carbon dioxide (CO₂) is very useful in blowing out a refrigeration system, but it's not necessary to use expensive chemically pure CO₂ for the job, points out Frank Carter of Detroit Lubricator.

If a cylinder of commercial grade CO₂ is allowed to stand upside down for two or three days, whatever moisture is in it will collect at the bottom. With the cylinder still upside down, crack the valve. Pressure will blow the moisture out of the cylinder leaving the CO₂ sufficiently dry for the purpose.

Emanuel Joins Curtis As Sales Representative

ST. LOUIS—Mason Emanuel has joined the sales division of Curtis Refrigerating Machine division of Curtis Mfg. Co.

Emanuel has been appointed district sales representative at Seattle, Wash. He has been actively engaged in the commercial refrigeration and air conditioning field for the past 15 years.

A graduate mechanical engineer, Emanuel received his degree from the University of California in 1934.

For efficient heat transfer "Ro-Fin" Tubes



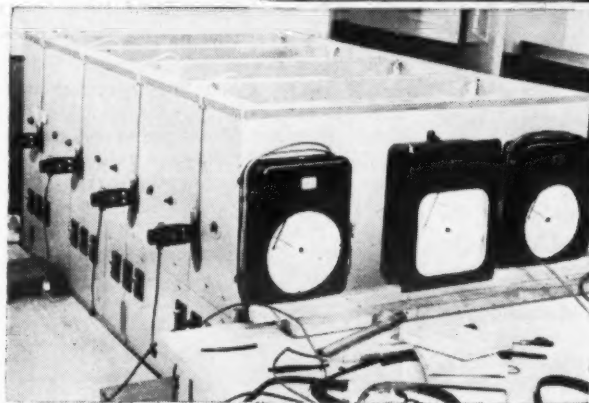
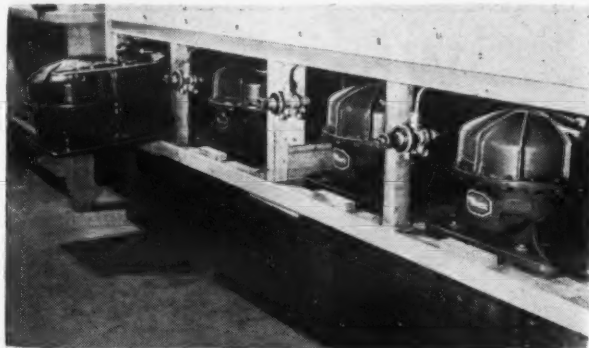
There are nearly 100 sizes of Rome Extended Surface Helical Fin Tubing in production . . . with or without threaded end connections, or to be used with standard flare connections.

Write for information on your heat transfer problems:



222 Canal Street • Rome, N.Y.

RIGHT: Hermetic units installed in hatchery, showing one of the units pulled out of drawerlike arrangement for servicing.



LEFT: Aluminum tank used for hatching fish. Recording instrument used in the hatchery experiment are shown in the foreground.

Parmetic Units Control Fish Hatching

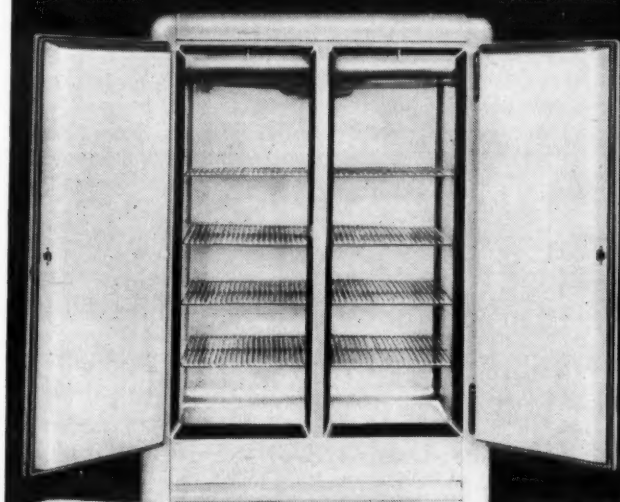
VANCOUVER, B. C., Can.—The International Pacific Salmon Fisheries Commission is using four ¼ hp. Lynch Parmetic units for the sole purpose of experimental fish hatching under controlled conditions, according to Fleck Brothers, Ltd. here.

Using four separate tanks constructed of aluminum measuring 1½ in. by 1½ in. by 4 in. long, each

tank temperature is controlled to within a plus or minus 1° F. through a variable range from 35° F. to 80° F.

Each Parmetic unit is hooked up to approximately 50 ft. of tinned copper tubing in a false bottom of each tank. The units are mounted on a slide that can be pulled out like a drawer for inspection.

JORDON Announces a "BIG 16" FOR SMALL FLOOR SPACE



16 Cu. Ft. with CEILING MOUNTED HIGH HUMIDITY BLOWER COIL

Gives fast, uniform cooling. Eliminates dehydration of foods. Out-of-way coil gives more space for storage. Costs less to operate.

The JORDON W-16 is only slightly larger than a domestic refrigerator

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Condensed dimensions: HEIGHT — 69" WIDTH — 39" DEPTH — 29" Including Hardware

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The New JORDON 10/4 2-TEMPERATURE REFRIGERATOR

- 125 lb. capacity FREEZER-LOCKER
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- ONE Condensing Unit with ONE simple control
- Small over-all dimensions with handsome, custom finish and details

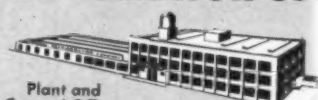
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Superior valve and fittings co.

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Modern Tight Sealed Homes Need Humidity Control To Keep Excessive Moisture from Blistering Paint

CLEVELAND—Too much moisture inside a house can cause the paint to peel off the outside walls, a very short order, Jim Chandler, real estate editor of the Cleveland Press, wrote recently.

In a series of three articles, he pointed out that excess humidity within the home, penned up by tightly sealed storm windows, insulated walls, and weather-stripping, was causing an estimated \$1,000,000 damage in new homes.

(An air conditioning system or a dehumidifier could prevent all this damage by pulling this moisture out of the air rather than letting it soak through the walls.)

Chandler said the homeowners were blaming the paint, when it blisters and peels off in a year or so after it is applied. But the paint is not the cause.

He explained that moisture naturally seeks dry air and when the air outside is dryer than the air inside, moisture tries to get out. In older homes, it can pass readily through uninsulated walls, cracks around doors, and other openings.

In newer homes, it has a harder time escaping and as a result accumulates in the walls. When moisture manages to pass through the wall and hits the cooler inside surface of the outer wall, the moisture condenses.

Then, as the heat of the sun at-

tracts it, it builds up water blisters in the paint. When these crack, the paint peels off the wall, leaving an unsightly as well as unprotected surface.

Chandler pointed out that there are a number of ways of preventing this moisture seepage through proper ventilating of the home.

One method is to use a dehumidifier in places where moisture content would be particularly heavy, such as laundry rooms.

Another is to install a direct vent to the outdoors from the laundry or open windows while washing and drying clothes.

Exhaust fans are particularly helpful in such places as the kitchen where they not only remove moisture, but also will remove odors and heat.

Exhaust fans can also be used in attics, where the air should be changed 1½ times an hour, he said. Moisture can be kept out of attics, too, by the use of moisture vapor papers, foils, and paints. Ventilation can be provided by louvers under the roof peak and at the eaves.

A house moisture meter is good insurance against wet walls and paint peeling, he declared, pointing out that "by watching the moisture meter you know when to bring ventilation controls into use."

He gave these rules for humidity control:

"When outdoor temperature is below zero, keep relative humidity below 25% at indoor temperatures of 70° F. When its between zero and 10° F. outdoors, hold indoor humidity at about 35%. At outdoor temperatures above 10° F., indoor humidity should not exceed 40%."

He also recommended that exterior moisture be prevented from getting into the house by repairing defects in construction and making sure that paint protection is adequate.

Air brought into the house by ventilation should be heated, except when brought into unheated attics, he said. If the house is heated by warm air furnace, an outside air intake can be added to the heating plant.

He concluded his series with these words:

"It would be a mistake, in trying to solve moisture problems, to throw away the home building advances of the past 10 years and go back to drafty cold-wall homes.

"By all means, improvements in warmth-saving and fuel-saving should be retained.

"Answer to our problems is to continue to build snug, dry houses and then to let indoor moisture escape by means of controlled exhaust-fan ventilation.

"The more automatic the controlled humidity, the better we'll like it and the safer we'll be from paint peeling."

Finland Rayon Plant Gets Carrier Centrifugal Units

SYRACUSE, N. Y.—Finland's Sateri rayon plant, the only one of its kind in that country and one of the largest in northern Europe, will soon score another first for Carrier centrifugal refrigeration, Carrier Corp.'s International Division has recently reported.

As part of a refrigeration and air conditioning project designed to make the Sateri mill one of the world's most modern, two Carrier centrifugal machines have been ordered—the first centrifugal refrigeration machines ever to be installed in Finland.

One of the units, with a cooling capacity of 334 tons, will handle process refrigeration, and the other rated at 273 tons will supply chilled water for air conditioning. Crepe-storage, sorting, spooling, spinning, and cell-wool production areas will be air conditioned.

Since the Carrier centrifugal refrigeration machine made its initial appearance in 1922, the company has manufactured more than 2,000.

Venezuelan Firm Signs To Handle Worthington Line

HARRISON, N. J.—Armando Capriles, president of Oficina Tecnica Armando Capriles C.A. (Otacca), Caracas, Venezuela, announced a recently signed distributorship agreement with Worthington Pump & Machinery Corp. here, to handle its air conditioning and refrigeration line.

Since 1938 the firm has been supplying Venezuela with industrial and institutional equipment, Telecommunications equipment, and refrigeration and air conditioning equipment, as well as office appliances.

MR. DISTRIBUTOR DEALER

Farm and home freezers, commercial display cabinets, dairy cases, bottle coolers, walk-in coolers

Profit by selling the American "Aristocrat" line

AMERICAN REFRIGERATION CORPORATION

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Hopkins, Minnesota

M-H Control Claimed To Provide More Even Heat, Reduce Chilly Floors

MINNEAPOLIS—A new automatic control system for gas-fired heating systems has been announced by the Minneapolis-Honeywell Regulator Co.

Nucleus of this system is a thermostat that regulates the frequency of burner operation so that heat is provided in smaller portions in mild weather and in progressively larger amounts as the outside temperature drops.

Since there are no long "on" and "off" periods, overheating and underheating is eliminated. Heat is also better distributed, reducing air stratification and chilly floors.

Also featured in the new control system is a diaphragm gas valve which has been virtually sound-proofed—an important factor when heating units are located in or near living areas.

The diaphragm is operated by an

integrally mounted relay type controller with a small, precision-made three-way pilot valve.

The valve functions equally well when used with natural, mixed, manufactured, and sulphur-bearing gases.

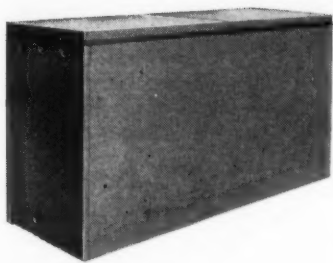
Bostwick-Braun Distributes Dust-Stop Air Filters

TOLEDO — Bostwick-Braun Co. here has been appointed distributor for Dust-Stop air filters manufactured by Owens-Corning Fiberglas Corp., the Fiberglas Corp. has announced.

Founded in 1855, Bostwick-Braun also handles a complete line of hardware, sporting goods, and industrial supplies in its sales area comprising Ohio, Michigan, and sections of Indiana and West Virginia.

PRECISE TEMPERATURE CONTROL

with **DOLE**
Ice-Cels

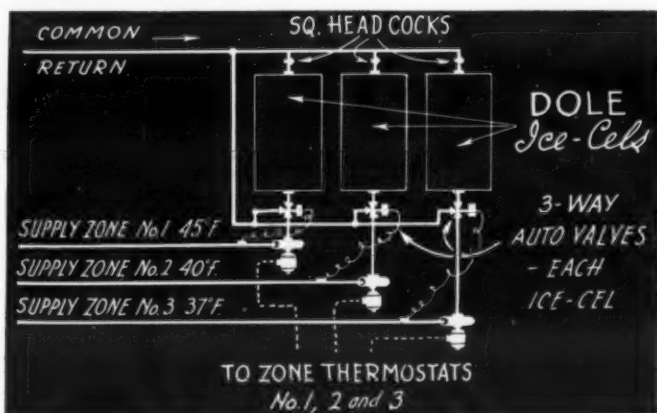


In industrial air conditioning installations such as bakeries, candy factories, drug manufacturing, commercial photography and X-Ray laboratories, where several zones are to be air conditioned, each with its own special dewpoint and temperature, one large compressor simply cannot serve economically, and a number of smaller machines increases the cost unjustifiably.

For such applications, DOLE Ice-Cels provide the answer. A circulating pump and 3-way bypass valve for each zone provide accurately chilled water to each zone and permit one compressor and associated equipment of proper capacity to operate on a 16-hour-per-day cycle with correspondingly lower first cost and with decreased operating and maintenance costs.

The connected horsepower in Ice-Cel installations is often much lower than in conventional direct-expansion systems since peak load periods can be taken care of by longer machine running time, and evaporative condensers and cooling towers can be correspondingly smaller and lower in cost.

There are industrial installations in your territory waiting to be sold. Get your share of this business. Write for engineering data and price list on DOLE Ice-Cels today.



DOLE manufacturing facilities including modern machinery and experienced personnel for sheet metal working are available for handling Government orders. We invite your inquiries.

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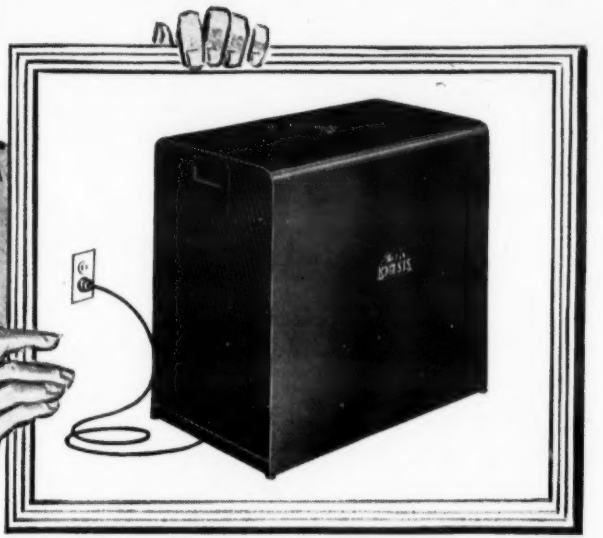
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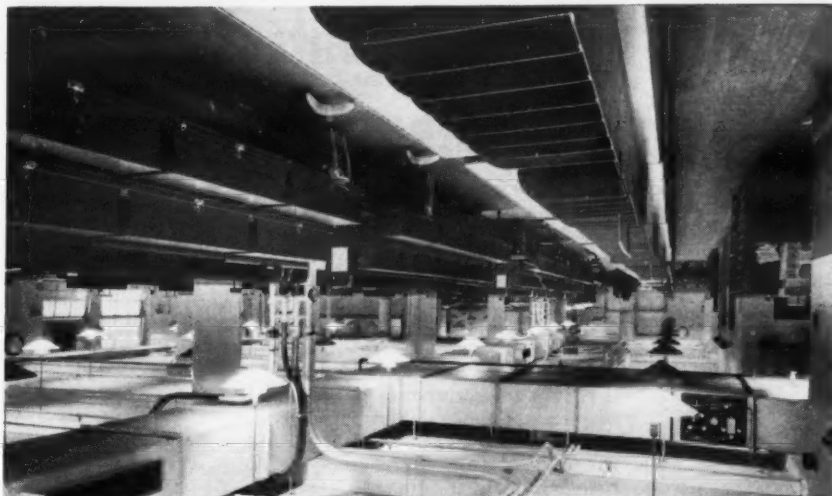
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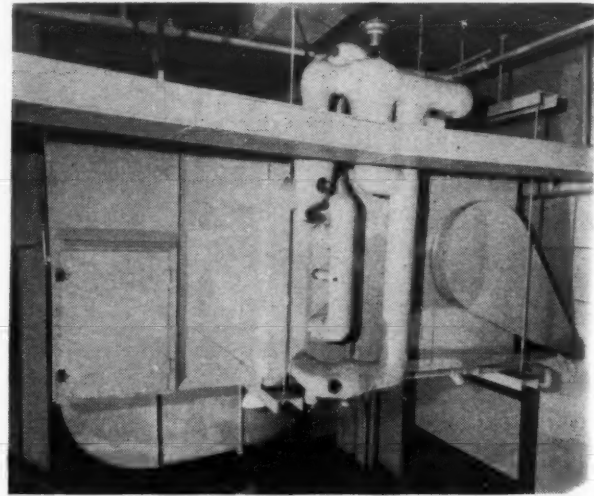
State _____



UPPER SALES floors of B. Altman store in New York City are air conditioned by UsAirco units suspended in acoustically treated enclosures.



NON-SELLING floors, such as the tenth, are provided with conventional ductwork connected to a unit, which like the others is supplied with chilled water from two Carrier centrifugals.



MAIN FLOOR has no visible ductwork because six units like this one are installed in stairwells or the basement below.

Absence of Visible Ductwork Is Feature of Year-Round Air Conditioning System Installed In N. Y. Dept. Store

NEW YORK CITY—Installation of year-round air conditioning for the 13-story B. Altman & Co. department store is now in its fourth year of progress, proceeding on a floor-by-floor basis without disturbing normal business operations.

The basement and seven floors of the block-square building at Fifth Ave. and 34th St. have already been conditioned by an unusual system that eliminates all visible ductwork through introduction of conditioned air at high velocities near the ceilings around the perimeter of the building.

As worked out by Green Engineering Co., the installing contractor, and R. L. Stinard, consulting engineer, a total of 42 UsAirco conditioning units ranging in capacity from 4,000 to 24,00 c.f.m. have been installed thus far. They are supplied with chilled water from two Carrier centrifugal compressors of 650 and 1,250-ton capacities.

The first eight floors of the store building occupy the full 400 x 200-ft. block bounded by Fifth and Madison Aves. and 34th and 35th Sts., while the ninth to thirteenth floors

measure approximately 200 x 100 ft. on the Madison Ave. side of the building. The basement, however, which extends out to the curb line on all four sides, has the greatest cubic foot volume.

The seven lower floors and part of the eighth are selling areas, while the remainder of the building is devoted to various other functions of the store.

Year-round air conditioning has already been installed for the basement and floors 1, 2, 3, 9, 10, 11, and 13. Pending complete installations, floors four through eight have been furnished with cooled and filtered fresh air.

By utilization of waste and basement space, cooling and heating of the entire main floor have been accomplished without placement of either equipment or sheet metal work in the selling area. On other floors, unit air conditioners, manufactured by the United States Air Conditioning Corp., are suspended from the ceiling in acoustically-treated enclosures close to the outside walls of the building.

Moreover, elimination of ductwork from selling areas was achieved with no loss in full year-round air conditioning control. Both temperature and humidity control are accomplished by the use of 50° chilled water and 2 p.s.i. steam for reheat to coils located in each air conditioning unit. Pneumatic controls are used throughout.

MAIN FLOOR USES 3 UNITS

The main floor is air conditioned by six units, of which three are placed off the floor in stair wells and three are suspended from the basement ceiling. New ductwork was used in conjunction with the latter units, but has been concealed above and between the show windows. The conditioned air is effectively introduced into the store area by direct throw at velocities in the neighborhood of 1,500 f.p.m. near the 20-ft. ceiling, without creating appreciable air motion at the floor.

On the second and third floors, where ceilings are 18 and 16 ft., respectively, the unit air conditioners have been placed in enclosures suspended from the ceiling along the perimeter of the building and have been integrated into the over-all architectural character of the store. In most cases, they are located above stock areas. Air distribution is obtained with double-deflecting adjustable grilles, mounted on the enclosure plenum chambers, providing air flow toward the center of the store and

along the walls.

The enclosures are oversized to provide room for a serviceman to move above freely. The backs are open, at a distance of only 2½ ft. from the wall, to provide for air intake without exposing the equipment to view from the floor.

The units are hung on rods with vibration eliminators, independently from the enclosures, which are bolted to angle-iron frames welded to the building's structural steel. As a further noise-reducing measure, the plenum chambers are lined with 1-in. acoustical material so that the noise level of the operating machinery is far below the general noise level in the store.

EXISTING FANS USED

Before the current operation was undertaken, the building was ventilated by three huge fans and associated ductwork in the basement. All of this equipment has been put to important use in the air conditioning system.

The fans provide fresh air for the entire building by drawing it from outdoors through an intake tunnel containing pre-heater coils, Raytheon electrostatic filters, Sturtevant and Trane spray dehumidifiers, and reheat coils.

One of these fans, the existing ductwork, and three UsAirco units comprise the basement air conditioning system, which furnishes a 100% fresh air change. The two other fans distribute the fresh air through ducts in two unused elevator shafts to the first eight floors of the building.

Existing vestibule heating units, located in the basement, and formerly used only for warm air heating of main floor entrances in the winter, now perform an all-year function. In the summer they move air at store temperature directly from the basement into the vestibules, creating a buffer area at a temperature between that of the warm outside and the cool interior of the store.

Filtered fresh air and sealed store windows, which have substantially reduced the dust content of the air, are supplemented by throwaway filters in each unit, to cope with infiltrating dust and lint from merchandise. This has proved extremely effective, not only in protecting the coils, but also in producing savings in unspoiled display merchandise and reduced painting and general cleaning costs.

The Altman building houses one of the few remaining large privately-owned electrical generating plants in the New York City area. Its boilers deliver steam at 150 p.s.i. and the generators exhaust at 2 p.s.i. The remaining energy in this exhaust steam, which was formerly wasted to the air in the summertime, is now used to perform several vital functions.

The two Carrier compressors in the engine room of the sub-basement are operated by steam turbines using the steam from 2 p.s.i. to a 26-in. vacuum. Consequently the only operating costs of the new refrigeration plant are the cost of pumping cooling water to the roof and chilled water to the units plus the cost of operating cooling towers on the roof.

For summer humidity control and winter heating, waste 2 p.s.i. steam is also delivered to pre-heat and re-heat coils in the fresh air intake and to heating coils in the unit air conditioners.

The chilled water is pumped from the sub-basement to a piping main in the basement, running along the periphery of the building. Branch takeoffs carry it to risers in unused dumbwaiter shafts in the outer walls. Steam, return, and drainage lines were also run in these shafts. Branch connections were taken off at each of the floor levels for distribution of these services to the individual air conditioning units.

The tower water, normally at about 75°, first cools the refrigerant in the heat exchanger, then, at about 85°, condenses the steam to a 26-in. vacuum, and is pumped to the cooling tower at a maximum of about 107°.

High pressure steam operates an auxiliary steam turbine pump which is interconnected with both the tower and chilled water pumps. In the event of pump motor failure, the steam turbine pump can take over either function.

It has, of course, been of primary importance during this entire installation program to avoid any interruption of the normal operation of the department store. This has been accomplished by doing as much of the fabricating as possible in the sub-basement during store hours. Design of the system also involved location of pipe runs where a minimum of overtime installation work would be necessary. Where it could not be avoided, and in placing the units themselves, all preparatory work was carried out between 8 a.m. and the store opening time, after which the work was carried on behind previously prepared and enclosed scaffolds.

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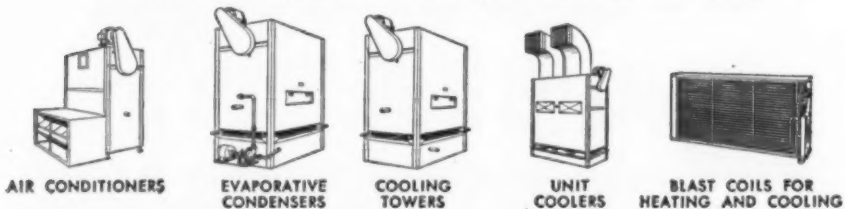


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Motor Design, Application

Noise, Temperature Limits, and Voltage Problems Covered
By ASRE Panel on Motors for Hermetic Units

DETROIT — "Economics is the great leveling force" in designing motors for hermetic units, declared H. Fleischer of General Electric, to start out the Domestic Refrigerator Engineering Conference at ASRE's 38th spring meeting at the Statler hotel here.

J. B. Brightman of G-E also presented a prepared discussion on application of motors in hermetics before Chairman Milton Kalischer of Westinghouse opened the session for general discussion.

Noise considerations, temperature limits, overloads, and voltage problems were the chief topics discussed. As for any startling improvements in hermetic motors, "none are likely in the foreseeable future," Fleischer declared in answer to a question.

"Any improvements now will probably be due to the development of better magnetic materials" rather than a change in basic design, he said.

MOTOR DESIGN IS SERIES OF COMPROMISES

"Motor design," Fleischer pointed out, "is a series of compromises. One could design for maximum efficiency, but the motor would be pretty large. One could design, instead, for minimum cost," but the performance results might not be satisfactory.

"How efficient should a motor be is another problem. To raise the efficiency the motor manufacturer must use more steel or copper, but it might be better for the refrigerator manufacturer to put that money into some other part of the system to improve the over-all efficiency," he said.

"Another factor in motor design is whether there is to be only one rating involved or a line. Almost invariably, though, we must design for a line of motors rather than a single rating."

The size of a motor for hermetics is generally determined by the maximum torque required by the compressor, according to Fleischer.

"Noise in motors could be the sub-

ject of several meetings," he added. "Choice of slot arrangement, including the problem in connection with noise, has plagued motor designers for years."

STARTING TORQUE PROBLEM

Another important problem is starting torque. He pointed out in this respect that split-phase motors may be used up through 1/4 hp., but on sizes larger than that the drop in line voltage would be objectionable. Capacitors must be employed on sizes larger than 1/4 hp.

Still another consideration is getting the starting winding out of the circuit when the motor comes up to speed. There are several ways to do that, according to Fleischer, who mentioned the relay in series with the winding, the hot wire relay, and the voltage relay which is "used on larger systems but is not adaptable for split-phase motors."

Cleanliness in motor manufacture and design is of importance, too, he said.

"Even the paper that goes into the motor must be free of any extractable material that might plug the capillary tube of the refrigerating system."

Regarding the application of motors to hermetics, the other speaker, J. B. Brightman, emphasized that motors "must be chemically stable. We run tests at high temperatures to accelerate the aging of the compressor, but it is questionable whether such tests give the same results as a unit operating for 15 years in the field," he admitted.

Most of Brightman's presentation was confined to a discussion of numerous curves on motor application problems. These have not yet been released for publication.

"What is a safe design temperature for hermetic motors?" This was one of the first questions asked when the conference was thrown open for general discussion.

"We try not to exceed 90° C. with Formex insulation," Brightman answered. "While Formex can be successfully operated at 100° to 105°

C., the possibility of driving moisture from the motor into the system is the limiting factor."

"This 90° C. is very conservative," commented Kalischer of Westinghouse, chairman of the conference. "We don't see any point ourselves in holding to such a conservative point."

PROTECTIVE THERMOSTATS SUGGESTED

Brightman later pointed out, however, that "if you increase the temperature from 90° to 100° C. you'd cut the life of the motor in half."

The comment that "more motor troubles are due to the starting winding burning out than any other trouble" was put forth by L. G. Packer of Westinghouse, who suggested that a protective thermostat "should be included in the starting winding circuit, too" to prevent such burnouts.

Problem of noise came up for some discussion, the point of question being the relation of noise to the concentricity of the air gap between rotor and stator.

"As long as you have slots in the motor you'll have some noise, but the noise due to slip frequency is worse," Brightman said. "This is due to not having good alignment and a concentric air gap."

J. R. Hornaday of Norge ques-

tioned this opinion. "We find come and go on all types of motors and compressors," he declared. "We have found some motors that weren't concentric and weren't noisy while other noisy motors were concentric. It hasn't been proved to our satisfaction that concentricity of the air gap is a major factor in motor noise."

It was brought out in answer to a question that general practice in motor design calls for an air gap of .012 in. with a tolerance of from .0105 in. to .013 in.

As for the moisture problem in motors, H. M. Elsey of Westinghouse commented that 10 hours at a temperature of 150° C. will bring the moisture content to less than 1/10 of a cc.

"Doesn't Formex flow at 150° C.?" it was asked.

"No, 165° C. is the absolute top bake-out temperature," was the answer. Close control of bake-out temperature is necessary, however, it was indicated.

Another questioner asked, "What are the highest voltages encountered on lines?"

"Voltages as high as 135 have been found on what are nominally 110-volt lines, and some three-phase lines nominally rated at 220 volts have run as high as 250 volts with a 10% leeway up and down," Fleischer reported.

Meyer Chain Takes Kelvinator

PORTLAND, Ore.—Fred Meyer, operator of a chain of appliance and food stores here, has added the Kelvinator line to the appliances carried by his outlets. Arrangements were handled by Roger Trick, Kelvinator zone manager, and Bob Scott of the Meyer organization.

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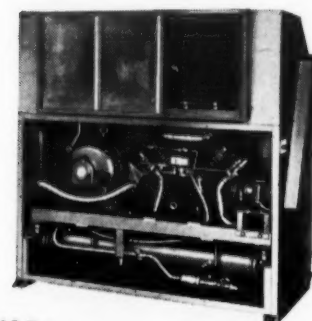
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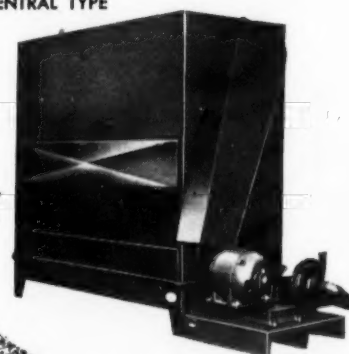
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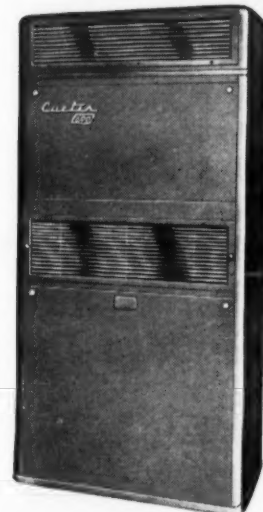
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Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers



Paul Reed

Repairing Damaged Refrigerator Finish

While attending the 1950 Annual International Convention of the Refrigeration Service Engineers Society at Long Beach, Calif., held in conjunction with the educational exhibit and conference jointly sponsored by RSES and the Refrigeration Equipment Manufacturers Association, we took the opportunity of visiting with some old friends, Carrol Miller, distributor for the Servel gas refrigerator for southern California, and his general manager, Charley Johnston.

Through their warehouse in Los Angeles, thousands of Servel gas refrigerators pass on their way to southern California dealers and eventually to the final users.

We could not but be impressed with the care that is given to be sure that the refrigerators, when they leave the warehouse, are in perfect condition and need only to be connected to the gas lines, without any further adjustments. They are carefully regulated to local gas

conditions, and inspected for possible damage during their long ride from the factory in the Midwest. Their inspection and test line rivals that of a manufacturer.

Also, they handle damaged or inoperative refrigerators for their dealers, especially cabinet work, and this really brings us to the point of our story.

If a gleaming white refrigerator gets a scratch in the paint or a dent (also called a "ding") in the metal, that refrigerator offends Mrs. Housewife. It keeps her food as well as before, makes as many ice cubes, and as quickly; and perhaps the marred part is against the wall and doesn't show. It makes no difference to the tidy housewife; that refrigerator has to be restored to its pristine beauty.

So Miller's paint shop is a busy, well-equipped and important part of his establishment. When the refrigerator emerges from that shop, it must and does look like new. Anyone who can find, or even tell what the damage originally was, qualifies as an expert.

As a demonstration for us, a refrigerator that had a deep dent on one side and the white finish cut clean down to the metal was repaired. It

had been damaged in unloading from a truck. Ordinarily this would be a tough job to take out the dent, restore the flawless surface, and spray it with a perfect match in grain, lustre, and color. Eut with the method and materials they use, the repair was not only a perfect job, in appearance, but it was also permanent.

REPAIRING A DENT AND SCRATCH

First, the repairman took a peculiar looking spray gun from a shelf and plugged it in to the electric current. To it was connected an air hose. He called it the metal-spray gun and said that he was preheating it so that it would be ready for use later.

Then the repairman sanded off all of the white lacquer clear down to the steel to a distance of six or eight inches all around the dent, using an electric disc sander, first with a 24 grit disc followed by a finer disc of 60 grit. This sanding heats the metal, and it is necessary to wait for it to cool to approximately room temperature before the next operation.



SPRAYING SOLDER with metal-spray gun on automobile body to fill dent.

COPPER PLATING THE STEEL

After the sanded metal had cooled, the repairman took a small bottle of liquid that he called "Reviver" and wet a small clean cloth with it and rubbed it on the sanded steel surface. The result was astonishing. The surface changed to a bright copper, just as if it had been copper-plated, which indeed it had, for the Reviver contains copper, which is deposited by chemical action on the steel surface.

COLD TINNING

Next he tinned the copper surface. He did this with a paste made from a powder called Cold Tinning Compound mixed with some of the liquid Reviver. He did the mixing with a small wooden paddle, until he had a fairly thick paste of smooth consistency and with no lumps.

He explained that it is necessary to mix the paste fresh and in a small batch, just a few minutes before it is used, and that unused paste must be thrown away.

He applied the paste to the copper-plated finish with an applicator, which was a small piece of wool felt on a handle for ease in using it. First he wet the felt applicator in clean water so that the paste would stick to it, and then spread a little paste on the applicator using the wooden paddle he had used in mixing the Cold Tinning Compound Powder and the liquid Reviver into a paste.

The application of the Cold Tinning Compound paste caused the copper finish to change to a silvery finish. He wiped this with a clean cloth to remove any excess tinning compound.

Now the surface was ready to spray the solder on to fill up the dent and to build the surface up smooth. The Reviver copper-plated the steel and formed a tight bond to the steel. The Cold Tinning Compound paste made a bond to the copper for the solder.

THE METAL-SPRAY GUN

The metal-spray gun was hot enough by this time. It requires about five minutes of preheating before it is ready for use. Its heat is controlled by a tiny built-in thermostat that keeps it at just the right temperature.

In the top of the head of the metal-spray gun is a hole into which the small stick of solder is fed. The electric heating element melts the solder, which feeds downward through a small hole, where it is picked up by the air and sprayed on to the tinned surface in the form of tiny flakes that adhere to the surface and to one another without flux.

SPRAYING ON THE SOLDER

The repairman held the metal-spray gun close to the tinned surface (only about an inch away) and moved it in a slow rotating motion until he had filled the hole and built up the solder to a fairly smooth surface, thicker in toward the center, and "feathered" thin at the edges. Unlike spraying paint or lacquer, he built the solder up to full thickness at each place as he went, not with successive thin coats over a



METAL-SPRAY GUN for spraying solder on tinned surface.



Photos courtesy of Albertson & Co.

MATERIALS NEEDED to repair dent and finish of appliances: (a) Reviver used to copper plate steel, (b) cold tinning compound powder which is mixed with liquid Reviver to form paste used in cold tinning copper surface, (c) felt applicator for applying cold tinning paste.

large surface, as is common practice with spray painting.

The solder is 30-70, that is 30% tin, 70% lead, but it is essential that the solder be as pure as possible. Some commercial 30-70 solders have impurities in them.

For ordinary hot soldering these impurities do little or no harm, but for metal-spraying, the solder must have the very minimum of impurities. The maker of the metal-spray gun furnishes 30-70 solder of a grade suitable for this use.

The air used for this metal-spray gun must be regulated and held to 70 p.s.i.g. Also important, the air must be dried and filtered air, not just air from an air compressor. Water or foreign matter in the air will result in spotty finishes and poor adhesion of the solder to the surface.

The gun must be kept clean. If used for long periods at a time, it should be examined and cleaned often. It must always be cleaned after every use, while it is hot. Remove the solder, clean out the solder well and blow out the air nozzle.

SANDING AND LACQUER SPRAYING

But to return to the repair job. The dent had been filled and the surface built up with solder, but it was rough. So the next step was to sand it down smooth. This was done with an electric disc sander, using a 36 grit disc. Care was taken to keep the disc on the solder and not allow it to cut into the undisturbed finish.

This final sanding again heated up the surface, so it was necessary to wait a few minutes until the surface cooled down to about room temperature. The repairman then blew the surface off with dried and filtered air and it was ready for the base and finish coats of lacquer, which he applied in the usual manner, with the conventional spray gun.

A few weeks ago we had occasion to be in Sioux City, Iowa, where Albertson & Co. are located. They manufacture and supply the metal-spray gun, Reviver, Cold Tinning Compound, and a suitable grade of 30-70 solder, also electric disc sanders and other types of tools. We are indebted to them for the accompanying illustrations and for further details on this method of cabinet repair, which is widely used in auto body shops also.

We appreciate Messrs. Miller and Johnston of Los Angeles calling this method to our attention and for demonstrating it. We are passing it on to our readers in the belief that it may be of value to many of them in doing an effective repair of damaged or marred refrigerator cabinets or other pieces of equipment.

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R. L. SEARS

Lynch Appointments-- Consumer Goods--

(Concluded from Page 1, Column 4)

Sears became director of sales for the Par Compressor Division during 1944.

Long associated with the refrigeration industry, he was recently elected vice president of the Refrigeration Equipment Manufacturers Association.

The Ohio divisions of Lynch are: The Packaging Machinery Division in Toledo and Par Compressor Division of Defiance, Ohio.

The Packaging Machinery division produces machinery for forming, wrapping, and cartoning butter and oleomargarine; equipment for packaging candies, cookies, and cakes for the confectionery and baking trades; and the Morpac paper packaging machine recently added to the products of this plant.

The Par Compressor division manufactures automotive type air compressors and commercial refrigeration condensing units, it is pointed out.

ATTENTION MANUFACTURERS!

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A reputable organization with associates of character, integrity, and 25 years of sales experience dealing with wholesale and dealer trade in the refrigeration industry—desire to hear from manufacturers seeking to distribute through exclusive agents or distributors in the New York Area.

The organization is well rated and will stand the closest scrutiny.

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SILVER ANNIVERSARY ISSUE

Coming September 17!



Important Events—

Twenty-five years ago Red Skelton celebrated his 13th birthday, Bob Hope his 23rd, Jimmy Durante his 33rd. Betty Grable, June Haver, and Dick Haymes became 10 years of age . . . and ACNR was born in Detroit.

Celebrating its 25th birthday . . . "The Newspaper of the Industry" will publish its Silver Anniversary Issue come September 17 this year.

This very special issue will review the major developments of the refrigeration and air conditioning industry during the past quarter century of its remarkable growth and progress.

This offers every advertiser a rare occasion to tell the story of the growth and progress of his own company . . . thus tying in with the editorial content and participating in this special event.

Plan now to take advantage of this promotional opportunity. Advertising closes September 7.

Air Conditioning & Refrigeration News

The Newspaper of the Industry

Most Prices Frozen at June 30 Level--

(Concluded from Page 1, Column 3)

higher but had merely filed their forms with OPS and had not actually put the new prices into effect, they are bound to the prices that were in effect June 30.

Following is the complete text on Interpretation 1 to GOR 13:

Text of GOR 13 Interpretation 1

Interpretation 1—GOR 13. Regulations in Effect as to Manufacturer on June 30, 1951.

Section 2 of GOR 13 provides that a seller's ceiling price for any commodity under a listed regulation is determined under that regulation if it "was in effect" as to him on June 30, 1951.

This interpretation is intended to clarify the meaning of the phrase "was in effect," and to provide a basis for determining whether a manufacturer had actually put a regulation into effect as to him prior to July 1. It is believed that this interpretation disposes of most of the questions presented to the OPS on this subject, and that application of the tests here stated will provide clear answers. But it is not possible, of course, to anticipate all fact situations; these may require further rulings, not modifying the rules here stated but developing other rules which must be taken into account.

Under GOR 13, a seller to be under CPR 22 or 30 must have exercised his option to put the regulation into effect on or before June 30. If he can show this, then the regulation is in effect as to him for all his products covered by that regulation.

How can a seller show that he put CPR

22 or 30 into effect as to him on or before June 30? He must do this by showing that on or before June 30, he had both complied with the requirements of the regulation and had taken action to put it into effect prior to July 1, either by making price increases effective prior to July 1, or by other action, such as actual written notification to OPS or his customers that he was putting the regulation in effect prior to July 1, 1951.

A necessary prerequisite to put CPR 22 and CPR 30 into effect in the case of a price increase was that a Form 8 be filed more than 15 days prior to putting the increase into effect. Each of these regulations also provides in effect that any seller who made it effective for an increase also made it effective for all decreases.

This means that no one can be said to have put CPR 22 or CPR 30 into effect on or before June 30 who did not receive a return receipt or other acknowledgment showing that his Form 8 proposing a price increase had been received prior to June 15, 1951.

A mere filing of the form, however, does not indicate that CPR 22 or CPR 30 was in effect as to a seller. Many sellers filed their Form 8's before June 15 but did not exercise their option to put into effect either the price increases or price decreases, or both, which would have resulted from the use of the regulations in question. The regulations were not in effect as to these sellers. If, however, prior to July 1, 1951 the sellers, acting pursuant to CPR 22 or CPR 30, made offers in writing, contracts, sales or deliveries at prices above their GCPR prices, that shows such sellers put the regulations into effect.

When the seller's only action in putting the regulation into effect was in terms applicable solely to deliveries after June 30, 1951, this shows that the seller was putting the regulation into effect after that date and was merely making advance arrangements for deliveries to be governed by ceilings in effect at the time of delivery. In that case, GCPR continues in effect. For example, a manufacturer whose increase was announced only in a price list marked effective July 1, 1951, is still under the GCPR. Where no offers or sales at the CPR 22 or CPR 30 prices were made and no other action was taken to indicate that CPR 22 or CPR 30 was put into effect, the general ceiling price

regulation remained in effect as to the seller on June 30, 1951.

A seller may be able to show that he put CPR 22 into effect on or before June 30 by showing that before June 15 he filed Form 8's proposing increases over GCPR ceilings for commodities A and B and actually put the increases into effect on or before June 30 for A. In this situation CPR 22 was generally in effect for the seller on June 30, even as to commodities other than A. If OPS had stopped the proposed increase for commodity B, he would be required to wait for OPS action as to that commodity; OPS will process his form and he can charge the ceiling price for B approved by OPS. Similarly, the mere fact that this seller did not file an additional form as to commodity C on or before June 14 does not preclude him from filing subsequently for that commodity, and he must file Form 8 before he sells commodity C, and comply with the 15-day waiting period if he proposes a price increase for that commodity.

However, if he filed only one Form 8 before June 15, and that was not in effect on June 30 because of OPS action, then CPR 22 was not in effect as to him on June 30.

A seller who has CPR 22 or CPR 30 in effect under GOR 13, has it in effect as to all provisions, including rollbacks, adjustments, supplementary regulations, filings, etc.

What has been said about CPR 22 and CPR 30 applies generally to the other manufacturers' regulations listed in GOR 13. Some of them require no filing and no 15-day waiting period. To show that these regulations were put into effect, the seller need not show a filing, but he must show that he either sold at the new higher prices, or otherwise took action which clearly indicated an election to price under the new regulations prior to July 1.

Under CPR's 18, Revision 1, 37 and 41, the election could have been made as to individual articles. Under CPR 45, the election applies to all articles in the category, that is, if the seller clearly indicated an election to price any articles under CPR 45, his election applies to all articles in the same category, whether the resulting ceiling prices are higher or lower than the GCPR ceiling prices for the articles.

A BALANCED LINE . . . A BALANCED FRANCHISE

A Worthington distributor can handle any job with exactly the right equipment because the Worthington line is the broadest.

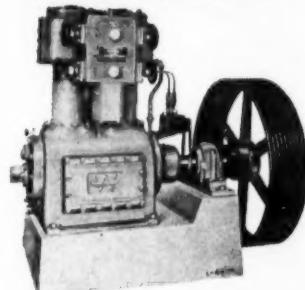
In addition to Freon equipment, Worthington makes—

PACKAGE AIR CONDITIONERS



3, 5, 7½ ton units. Also for remote location—7½, 10, 15, 20, 25 ton units.

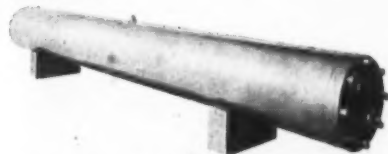
AMMONIA COMPRESSORS



1 to 150 tons. Also ammonia boosters.

FAN AND COIL UNITS

A complete line of evaporative condensers, evaporative coolers, air conditioning units, wet and dry product coolers for both Freon "12" and ammonia.



Also: shell and tube condensers, water coolers, valves, fittings, pumps



The Largest "Cast" . . . and the Biggest "Star" in the Business

You who handle the Worthington line have three big selling "plusses."

You handle a *complete* line. Therefore, you can always recommend—without bias—the *right* equipment for the job.

You can talk about the *best* compressor in the business. One basic compressor design covers a size range from 2 to 125 tons in three cylinder sizes.

You can promise *lowest-cost* operation because Worthington also *builds* (not just assembles) all the important components interrelated with the compressor—all designed by the one manufacturer for efficient companion

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operation on the job.

Remember—nobody else has a broader line, a better compressor, or a completely integrated and balanced system.

WORTHINGTON FREON-12 COMPRESSOR FEATURES:

exclusive Feather* Valve—simplest, tightest, quietest ever made—eliminates valve grinding and rarely needs replacement. Lightweight automotive pistons. Internal manifold. Renewable cylinder liners. Leak-proof, continually-cleanable force-feed lubrication on larger models. Positive manual or automatic capacity control.



AIR CONDITIONING AND REFRIGERATION

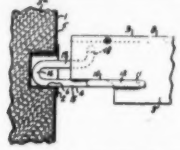
Take advantage of the completeness of the Worthington line and capitalize on Worthington's national advertising. Find out why there's more worth in Worthington by writing Worthington Pump and Machinery Corporation, Air Conditioning and Refrigeration Division, Harrison, N. J.

A.1.10

PATENTS

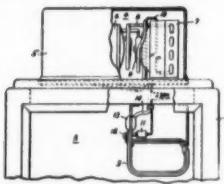
Week of April 10
(Continued)

2,548,593. SUPPORT FOR SHELF OR BASKET RAIL WITHIN A REFRIGERATOR. Horace W. Eagles, Erie, and Charles E. Martin, Westleyville, Pa., assignors to General Electric Co., a corporation of New York. Application Jan. 26, 1950, Serial No. 139,634. 2 Claims. (Cl. 248-239.)



1. A horizontal supporting structure comprising a horizontal rail of inverted U-shaped cross section and supporting means therefor, a portion of each end of each of the side portions of said U-shaped rail being shaped to provide a supporting shoulder for said rail, a pair of generally U-shaped clips each pivotally connected to a corresponding end of said rail, each of the legs of each of said U-shaped clips including an extended portion, means for engaging said extended portions, and each of said legs further including an intumed portion engageable with said supporting shoulder in a predetermined position of said rail whereby each end of said rail is supported only when said rail occupies said predetermined position.

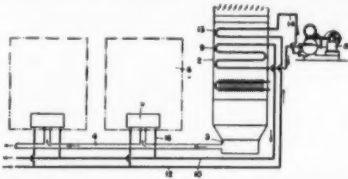
2,548,643. REFRIGERANT FLOW CONTROLLING DEVICE. Willis R. Whitney, Schenectady, N. Y., assignor to General Electric Co., a corporation of New York. Application Nov. 9, 1946, Serial No. 708,963. 3 Claims. (Cl. 62-127.)



1. In a refrigerating system including a high side and a low side, an evaporator on the low side, means including a restricting conduit for conducting refrigerant from said high side to said evaporator, and means for maintaining the pressure in said restricting conduit above a predetermined minimum at which freezing of moisture would occur, said last-named means including a second conduit of larger cross-sectional area having moisture absorbing material therein extending across the entire cross-sectional area thereof, said second conduit being disposed between said restricting conduit and said evaporator the length and densi-

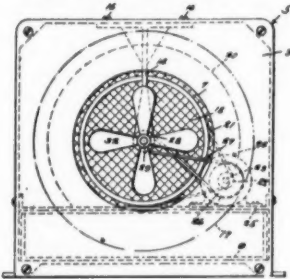
ty of said moisture absorbing material in said second conduit being selected so that the relative resistances to flow of refrigerant offered by said conduits are such that any pressures below said predetermined minimum will occur in said second conduit and any freezing of moisture will be localized in said moisture-absorbing material.

2,548,665. ROOM COOLING UNITS EMBODYING CONTROL TO LIMIT CONDENSATION. Walter A. Grant, Fayetteville, N. Y., assignor to Carrier Corp., Syracuse, N. Y., a corporation of Delaware. Application March 11, 1948, Serial No. 14,306. 5 Claims. (Cl. 62-6.)



1. In a room cooling unit, the combination of a heat exchanger through which conditioning medium is routed in heat exchange relation with air to be conditioned, means for regulating flow of conditioning medium through the heat exchanger, a single temperature responsive member for governing the flow regulating means in response to dry bulb temperature of air to be conditioned, a member to collect condensate resulting from the heat exchange relation of the conditioning medium and the air, and means for wetting the temperature responsive member with condensate when a predetermined quantity of condensate is collected whereby said temperature responsive member reflects substantially the wet bulb temperature of the air being conditioned so that the flow regulating means is actuated in accordance with the wet bulb temperature of the air to be conditioned.

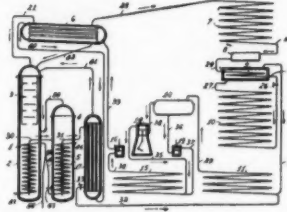
2,548,694. AIR CONDITIONING APPARATUS. Walter E. Wiesenthal, Wichita, Kans. Application Oct. 28, 1947.



An air conditioning apparatus, comprising a housing having its front and rear sides open, a vertical bar secured at the rear of the housing, a bearing secured to said vertical bar, a bracket depending from the top of the housing, said bracket having front and rear bearings, the rear bearing aligning with the bearing secured to said bar, a shaft disposed in the aligned bearings, a foraminous disc and pulley secured on said shaft, a water

tank supported within the bottom of the housing through which said foraminous disc operates absorbing water from the tank, a fan shaft mounted in the front bearing of the bracket, a fan and pulley secured to the fan shaft, a motor shaft mounted within the housing on which a motor is mounted, said motor including a motor shaft having its ends extended beyond the motor, pulleys secured to the ends of said motor shaft, and belts operating over the pulleys of the motor shaft, pulley on the fan shaft and pulley of the foraminous disc shaft, rotating the fan and foraminous disc, rotating the fan and foraminous disc.

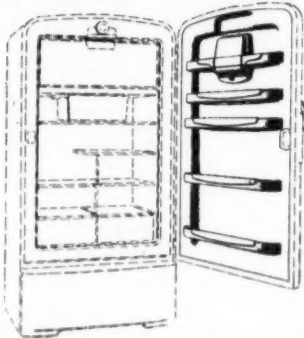
2,548,699. REFRIGERATING MACHINE OF THE COMBINED COMPRESSION-ABSORPTION TYPE. Raoul Bernat and Henri Bernat, Bordeaux, France. Application Oct. 29, 1945, Serial No. 625,340. In France Sept. 8, 1943. 8 Claims. (Cl. 62-119.)



1. A refrigerating machine of the combined compression-absorption type comprising means for heating a mixture of a liquid solvent and cooling fluid, means for separating said solvent and fluid, an evaporator, a first absorber having a pressure therein at most approximately equal to that in said evaporator, a second absorber having a pressure therein higher than that in said evaporator, means for separating said fluid undissolved in said first absorber from the mixture of dissolved fluid and solvent, means for forcing said undissolved fluid and said mixture of dissolved fluid and solvent into said second absorber, said means for separating said undissolved fluid from said mixture of dissolved fluid and solvent being a receiving vessel and said means for forcing said undissolved fluid and said mixture of dissolved fluid and solvent being located between said vessel and said second absorber.

DESIGNS

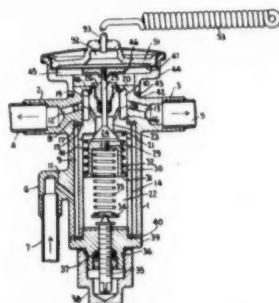
162,852. REFRIGERATOR CABINET. John McLeod Little, Toledo, Ohio, assignor to Avco Mfg. Corp., Cincinnati, Ohio, a corporation of Delaware. Application Jan. 12, 1951, Serial No. 13,772. Term of patent 14 years. (Cl. D67-3.)



The ornamental design for a refrigerator cabinet, substantially as shown and described.

Week of April 17

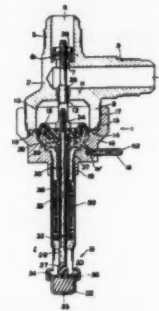
2,548,866. THERMOSTATIC EXPANSION VALVE. Franklin Y. Carter, Dearborn, Mich., assignor to Detroit Lubricator Co., Detroit, Mich.



1. In a thermostatic expansion valve, a tubular shell having a concentrically apertured end wall and an open end and an internal annular shoulder spaced from said end wall, a tubular body member having a closed end wall, said end wall having an external annular shoulder seating on said shoulder to divide said shell internally into an annular inlet compartment and an outlet compartment, said body member having an end wall having a projecting portion extending through said shell aperture and having a second annular shoulder seating on said shell end wall, said shell having an inlet passageway leading into said inlet compartment and having an outlet passageway leading from said outlet compartment, said body member having a valve seat therein separating said body member internally into an inlet chamber and an outlet chamber, said body member having a passageway through its said wall connecting said inlet compartment to said inlet chamber and having a passageway connecting said outlet chamber to said outlet compartment, a valve member operable with said seat, said body member having a surrounding shoulder seating against said shell to close said open end, a thermostatic power element having a movable operating member and mounted on said shell, said surrounding shoulder and said power element facing each other and being spaced from each other by said shell, means operatively connecting said operating member to said valve member, and means clamping said body member surrounding shoulder and said power element to said shell.

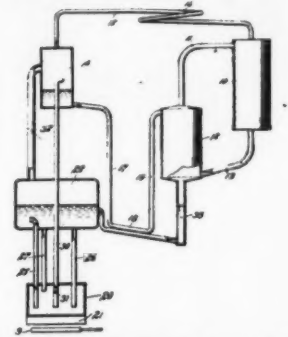
2,548,878. THERMOSTATIC VALVE HAVING SEALING DIAPHRAGM AND SUPPORTING MEANS THEREFOR. Ernest J. Dillman, Detroit, Mich., assignor to Detroit Lubricator Co.

1. A thermostatically operated valve for controlling flow of fluid under pressure comprising a valve casing having an inlet and an outlet and an interconnecting passageway, a movable valve member in said passageway for controlling flow of fluid



therethrough and having a valve stem, a thermostatic power element operatively connected to said valve stem for moving the same, a flexible diaphragm of an elastomeric material interposed between said power element and said valve member and sealed to and movable with said stem and shielding said power element from the path of fluid circulating through said valve, liquid means interposed between said diaphragm and said power element and providing a solid backing support for said diaphragm to prevent rupture thereof by fluid line pressure, and said diaphragm having excess material forming a corrugation operable to be flexed against said liquid means and to maintain contact therewith throughout the entire range of movement of said valve stem by said power element.

2,548,921. ABSORPTION REFRIGERATION. Baltzar Carl von Platen, Stockholm, Sweden, assignor, by mesne assignments, to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden. Application June 26, 1946, Serial No. 601,682. In Sweden June 27, 1944. 15 Claims. (Cl. 62-119.5.)



1. Refrigeration apparatus having a plurality of interconnected parts forming an absorption liquid circuit comprising an absorber and a generator unit including first means defining a space for absorption liquid and a riser tube extending upwardly therefrom through which liquid is adapted to be raised by vapor-lift action to cause circulation of liquid in said circuit, heating means for applying heat to a wall of the space to effect heating of liquid therein and cause raising of liquid in said tube, and structure embodied in said generator unit which provides a path of flow for liquid which, together with said first means, forms a local circuit including the space and through which liquid recirculates, the connection of said path of flow and said space with respect to said wall to which heat is applied being such that intense localized heating by said heating means of liquid returning to said space in the local circuit is substantially avoided whereby superheating of liquid is prevented.

(To Be Continued)

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POSITIONS WANTED

SALES & BUSINESS administrative executive with extensive experience in the refrigeration, air conditioning and heating industry. Qualifications: aggressive, promotional, organizational, management, ingenious and ability to handle and deal with people. Well acquainted in industry. Right age. Presently employed. Would consider position with well established company or corporation. Write BOX 3767, Air Conditioning & Refrigeration News.

REFRIGERATION ENGINEER: Desires position with manufacturer of domestic refrigerators or freezers. Ten years' experience in design, development & testing of fractional horsepower compressors, condensing units and housings. Extensive laboratory experience. B.S. degree. Registered Engineer. Member A.S.R.E. BOX 3773, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

REFRIGERATION PROJECT engineer—must have good theoretical knowledge of refrigeration and heat transfer, experience in design and application of fraction horsepower refrigeration systems (capillary type especially) for mass production. Personality suitable for contact with other departments, suppliers, and customers when necessary. Salary range, \$4000 to \$6500 per year. Address all correspondence to THE VENDO COMPANY, 7400 E. 12th Street, Kansas City, Missouri.

SALES ENGINEER wanted with experience selling air conditioning and refrigeration equipment (through distribution) to commercial and industrial markets. Positions are available at various locations. Personal interviews granted only after receipt of written application giving full details of experience. Address: WESTINGHOUSE ELECTRIC CORPORATION, Sturtevant Division, Dept. AC, Hyde Park, Boston 36, Mass.

AGGRESSIVE MILLION dollar manufacturer of commercial refrigeration and restaurant equipment located in central midwest desires engineer with production experience to take charge of experimental and development department. Give complete resume including age, education, experience, references and past employment in first reply. Write BOX 3769, Air Conditioning & Refrigeration News.

REGIONAL REPRESENTATIVE for northeastern United States . . . to represent large manufacturer of refrigeration and air conditioning equipment for distribution of refrigeration items through dealers and distributors. Experience in dealer selection, organization and sales training desirable. Give complete details. All replies confidential. Our organization has been informed of this ad. BOX 3774, Air Conditioning & Refrigeration News.

BRANCH MANAGER wanted by nationally known manufacturer to take complete charge of retail branch located in central United States. Experience should include sales training, general administrative, collections, service, etc. Thorough knowledge of business essential. Good opportunity for right man. Write giving complete details. Replies strictly confidential. BOX 3775, Air Conditioning & Refrigeration News.

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BACK PRESSURE valves for ammonia and Freon 3 ton capacity \$19.50 ea. 6 ton capacity \$29.50 ea. ASSOCIATED IN-

DUSTRIES. P. O. Box 37, Terminal Island, California.

FREON DEHYDRATORS cat. #28D50, 1/2" O.D.S. Demountable, side outlet \$7.50 ea. freight allowed. ASSOCIATED INDUSTRIES. P. O. Box 37, Terminal Island, California.

WATER COOLER—Prominent brand insulated tank cooler-model C2W140135—in original crate—storage 140 gallons—capacity 990 G.P.H. 80° - 50°. Net \$895.00. Cafeteria water cooler—Prominent brand cabinet model 25G2—capacity 25 G.P.H. 80° - 45°. Less condensing unit. Net \$245.00. JUDSON C. BURNS, 31st & Oxford Sts., Philadelphia 21, Pa.

ELECTRIC WATER coolers—Pressure type 4 gal. \$137.50, 10 gal. \$169.50, bottle type \$125.00. Butcher beam scales \$22.50. Porcelain platters 10x15x1/4" \$5.50 dozen. All merchandise new, nationally advertised, in original crates f.o.b. Phila. GENERAL REF. & STORE FIXTURE CO., 919-21 W. Girard Ave., Phila. 23, Pa.

1/4-HP open and sealed type prominent brands condensing units complete; brand new; limited quantity; act now; \$52. each FOB New York; write for specifications. Other sizes also available; MANN REFRIGERATION SUPPLY CO., 15 Astor Place, New York 3, N. Y.

SECTIONAL CUSTOM-built refrigerator, 32" long; 18" wide; 10" high. Built in inter-locked sections; outside beaded fir & inside D & M fir lumber, 6" fibreglass insulation. Equipped with 3 HP Copeland Refrigeration Unit and 1 Thermo-Bank Combination #3 Unit including 2 blowers & automatic defroster. Equipped & built to maintain zero degrees Fahrenheit. Price \$3,000 FOB Minneapolis. NORTHWEST FUR AUCTION CO., 329 Hennepin Ave., Minneapolis, Minnesota.

TO CHANGE brands will sacrifice one 3 H.P. and one 5 H.P. G.E. 1950 conditioners in crates. Make us an offer. SCHOUTEN-KLOKNER COMPANY, 153 N. Pearl Street, Green Bay, Wisconsin.

FOR SALE—while they last—standard makes—new hermetic units—static & fan-cooled cond. 1/4, 1/2, 3/4, 1, 1 1/2, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 120, 150, 200, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000, 1200, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 6000, 7000, 8000, 9000, 10000, 12000, 15000, 20000, 25000, 30000, 35000, 40000, 45000, 50000, 60000, 70000, 80000, 90000, 100000, 120000, 150000, 200000, 250000, 300000, 350000, 400000, 450000, 500000, 600000, 700000, 800000, 900000, 1000000, 1200000, 1500000, 2000000, 2500000, 3000000, 3500000, 4000000, 4500000, 5000000, 6000000, 7000000, 8000000, 9000000, 10000000, 12000000, 15000000, 20000000, 25000000, 30000000, 35000000, 40000000, 45000000, 50000000, 60000000, 70000000, 80000000, 90000000, 100000000, 120000000, 150000000, 200000000, 250000000, 300000000, 350000000, 400000000, 450000000, 500000000, 600000000, 700000000, 800000000, 900000000, 1000000000, 1200000000, 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Servicing Hermetics In the Field

This is another in the new series of articles written to show the average serviceman how to service hermetic units in the field. Even those who have been working on hermetics for some time will find basic and practical information in these articles that will prove extremely helpful.

How To Service Units with Stuck Unloader Valves

By Arne Perttola, Owner and Manager
Brighton Hermetic Service, Detroit

Some hermetic compressors are equipped with an "unloader valve." This valve is located within the dome, and its purpose is to allow the unit to start with the pressures balanced.

When the unit starts and before it gets up to full running speed, the needle and seat assembly is open, allowing the compressor to discharge into the low side of the system. After the unit has reached almost its normal running speed, this needle and seat assembly closes so the gas is no longer by-passed, or discharged, into the low side.

Compressors having unloader valves are seldom used in a system having a capillary tube. Among the compressors using unloader valves are the older style General Electric models with high side floats, Westinghouse units with high side floats, and some Tecumseh models used with expansion valves.

Like all mechanical devices, the unloader valve can become defective. This does not happen often, however. When it does happen, though, the unloader valve may stick, either in the closed or open position, or it may leak.

If the unloader valve sticks open, the unit will not pump at all. Obviously, with the gas being continuously pumped through the by-pass into the low side, the refrigerant is merely "chasing its tail."

Should the unloader valve leak, the symptoms would be about the same as if the compressor head valves were defective. In other words, the unit would be quite inefficient.

In the event that the valve is stuck open or leaking, the compressor will have to be replaced or rebuilt.

If the unloader valve is stuck in the closed position, however, it is possible to remedy the condition in the field without replacing or rebuilding the unit.

With the unloader valve stuck closed, the unit fails to start when there is considerable pressure difference between the high and low sides. For example, if the evaporator were quite cold and the condenser warm, the unit would not start if the unloader valve were stuck in the closed position. As the evaporator defrosts, it warms up, raising the pressure of the gas on the low side. When the pressures become balanced between the high and low sides the unit will start under this condition.

Of course, this does not give satisfactory operation of the unit.

Here's a suggested solution that can be used in the field. A compressor equipped with an unloader valve usually has a split-phase type of motor. By installing a proper size capacitor, as was previously explained in this series, the split-phase motor can be made to start even though the unloader valve is stuck closed. Proper installation of the correct capacitor should give satisfactory results in this case.

AIR BAFFLES AND CHIMNEYS ARE HIGHLY IMPORTANT

The chimneys and air baffles that direct the airflow on a household refrigerator are very important for the operation of the unit, even though most of them are made of cardboard. Because these baffles and chimneys are made of cardboard, many servicemen think them unimportant and neglect to install or replace them.

Actually, these air baffles are so important in directing airflow across the condenser that some manufacturers refuse to acknowledge the guarantee on the refrigerator if the baffles have not been in place.

Some refrigerators have cardboard chimneys up the back. These may become flattened or torn in moving or when servicing or replacing the unit. Because of the type of construction of the baffle, the serviceman may decide "that old piece of cardboard" is unnecessary and throw it away. This will result in a number of callbacks, for if there isn't enough airflow across the condenser the system won't operate properly.

Some units equipped with a condenser fan also have small pieces of cardboard extending from the side of the condenser to the cabinet wall to properly direct the airflow. The user often disposes of them while cleaning the condenser or oiling the fan. Servicemen have been known to do it, too.

When making a service call, even if the trouble is only minor, the serviceman would do well to check the condition and position of the air baffles. This is particularly true if the refrigerator is still in warranty.

The importance of these air baffles can't be emphasized too greatly if the hermetic unit is to operate properly for its normal life expectancy.

Norris-Thermador To Make Cartridge Cases for Army

LOS ANGELES — Norris-Thermador Corp. has entered into a contract with Army Ordnance to establish a plant for the manufacture of steel cartridge cases at Riverbank, Calif., it was announced recently.

The company president said the new plant will include six production lines with 150 employees per shift.

Norris-Thermador's Los Angeles plants currently devote approximately 50% of their over-all production capacity to military and defense needs. These plants also produce automobile wheels, pressed steel plumbing ware, stainless steel cooking utensils, high pressure gas cylinders, electric ranges and water heaters, electric space heaters, evaporative coolers, transformers, and fractional horsepower motors.

Netherlands Firm Seeks U.S. Appliance Manufacturers

WASHINGTON, D. C.—Participation of U. S. manufacturers in the production of electric household refrigerators and washing machines is sought by a firm in the Netherlands, according to the Department of Commerce.

N. V. Electrische Apparaten en Metaalwarenfabriek Rudolf Blik, 38-44 Waldorpstraat, The Hague, wishes to extend its present production program of electric household equipment and invites correspondence from U. S. companies.

Industries Convert Waste Products To Power Source for Air Cooling

EVANSVILLE, Ind.—How various companies are effecting savings by utilizing wastes as sources of energy for the Servel air conditioner was related by John K. Knighton, general sales manager of Servel, Inc.

He reported that a Tennessee factory, which has always had waste wood scraps from its pencil-manufacturing operations, now uses the wood shavings to produce steam for a Servel air conditioning unit.

The resultant year-round humidity control reduces wood warpage and cuts down loss of prime materials, Knighton said. In addition to realizing savings on both prime materials and fuel, the company also saves on expenses for the disposal of materials once considered waste, he pointed out.

In a different type of operation, a blueprint company in Kansas City found it could take the waste heat from two gas-fired internal combustion engines, and, by installing a simple cooling system and a Servel air conditioner, use it to heat the building in winter, cool it in the summer, salvage waste water for washing purposes in the blue print machines, and produce the electrical power for the machines as well as for the general lighting, Knighton said.

He also cited the case of an Indiana brewery, which had an abundance of waste steam and waste water in its operation. Now, he said, these wastes feed into the Servel unit to provide year-round air conditioning

for the brewery's office building across the street, with almost no operating cost.

These units, operating in many other plants throughout the nation, have started a chain reaction in waste savings, he declared.

The result, he said, is increased production, more raw materials for processing and lower operating costs, factors that assume more and more importance as defense needs rise and the amount of materials available for normal production drops.

New Thermo-King Railway Co. To Make Refrigerator Cars

MINNEAPOLIS — U. S. Thermo Control Co. here has announced the formation of the Thermo-King Railway Corp. to specialize in the manufacture and sale of mechanical refrigerator cars.

Joseph A. Numero, president of U. S. Thermo Control will act as president and treasurer of the new concern and Myron B. Green, vice president and sales manager of the parent concern, will serve as vice president and secretary.

U. S. Thermo Control will receive 60% of the 500,000 authorized shares of common stock for patent rights, inventory, and cash. The remainder will be sold to the public at \$1.50 per share through the office of George F. Breen, New York City underwriter.

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Headquarters for Air-Conditioning Refrigeration Heating Equipment and Supplies
2326 University Avenue, St. Paul 4, Minn.

Repairmen Get MRO Allotments--

(Concluded from Page 1, Column 5)

For customers who are not entitled to use these ratings, this regulation authorizes the repairman (meaning the head of the repair firm) to use an RE allotment symbol to get the three controlled materials up to certain maximum quantities and a DO-RE rating to get other materials.

Regulation 7, however, does not limit the quantity of materials that the serviceman may obtain without using these symbols. But, if the serviceman uses these symbols in any quarter, he is subject to all the provisions of the regulation, including those restricting his inventory.

Regulation 5 also provides the same option except that the businessman can use the MRO and DO-MRO symbols to obtain up to 20% of his quota before he is obligated to abide by all the provisions of the regulation. He is also permitted to use these symbols to get MRO supplies and minor capital additions up to \$1,000 in any one quarter regardless of his quota.

A minor capital addition is any capital addition whose total cost, excluding labor cost, amounts to less than \$750.

The quarterly quota permitted is 30% of the amount spent for MRO supplies during the year 1950 or during a fiscal year ending before March 1, 1951. Or, if the businessman prefers to work on a seasonal basis, his quota for any quarter is 120% of the amount spent for MRO supplies during the corresponding quarter in 1950.

The businessman can charge expenditures against his MRO quota either during the quarter in which his delivery order specifies that delivery is to be made or in the quarter in which the MRO supplies are actually received. He may use either one of these methods, but once one is selected, he cannot change it.

He charges against his quota, all expenditures for materials for MRO whether or not they were obtained by use of an allotment symbol and expenditures for minor capital additions only if the materials were obtained by using an allotment symbol.

Service firms do not charge MRO materials obtained for customers against their own quotas, but against that of their customer.

If a person has obtained MRO materials by using an allotment symbol, he can use them for a different purpose provided he is already authorized to obtain materials for that purpose.

To replace in his inventory the MRO materials used for that purpose he must use the allotment symbol authorized for that purpose. He cannot use the MRO symbol again.

Each person using MRO symbols is required to keep records for two years that show what his quarterly quotas are; how he computed them; the factual justifications for them and for corrections and revisions; any elections made or other options exercised; and records of receipts, deliveries, inventories, and use of all materials for MRO or minor capital additions whether or not gained by

use of allotment symbol or rating. This must be done in sufficient detail to permit an audit to determine whether the regulation has been complied with.

The regulation also includes a schedule of items that cannot be obtained by using the MRO or DO-MRO symbols. These include all basic, organic, or inorganic chemicals, their intermediates or derivatives other than compounded end products not customarily sold as chemicals; items appearing in List A or B of NPA order M-47A; nylon fibers and yarns; packaging materials and containers; paint, lacquer, and varnish; paper and paper products; paperboard and paperboard products; printed matter; photographic film; and rubber tires and tubes.

Under Regulation 7, service organizations are limited in the amount of controlled materials they may receive in any one quarter with the RE allotment symbol to the following:

Carbon steel (including wrought iron), alloy steel (except stainless steel), stainless steel (to include not more than 3 tons of alloy steel and 1 ton of stainless steel).....20 tons.

Copper and copper-base alloy brass mill product, copper and copper brass alloy foundry products and powder500 lbs.

Aluminum500 lbs.

Copper wire mill products (for functional uses only)\$150 worth or 20% of what they used during 1950, whichever is greater.

No limit is specified on the amount of materials they can get with the DO-RE rating. They are authorized only the amounts actually needed for the work at hand.

A repairman may use the repair parts and materials which he buys under this regulation only to do maintenance and repair work. He may not use what he buys to make products, such as repair parts, which he does not expect to use himself in making repairs, nor may he use it to replace materials or parts solely to improve the original design.

A repairman may, however, use repair parts and materials which he buys under this regulation to recondition or rebuild a damaged or used item which he plans to sell.

Whether or not he uses the procedure specified in this regulation to obtain materials, a repairman may not receive any item of controlled material if his inventory of that item is, or would become, more than he needs to operate his business as a repairman during the next 60 calendar days.

By the same token, his supply of non-controlled materials cannot exceed a "practicable minimum working inventory." However, if the material in question is sold only in certain minimum quantities, he can buy that minimum quantity even though it increases his inventory beyond that specified above.

The repairman is required to retain for at least two years at his regular place of business all documents on which he relies as entitling him to accept delivery of MRO materials.

Underwriters--

(Concluded from Page 1, Column 5)

totally enclosed type and shall be so designed and located that oil used for lubrication cannot enter the oxygen-rich air stream.

"Motors having openings in horizontal surfaces shall be so installed and shielded as to prevent particles from dropping out of the motor on combustible material within or outside the device in which the motor is installed."

Strength requirements for carbonators are included in the proposed UL standard for the first time. This paragraph is as follows:

"Carbonators and other vessels pressured from compressed gas cylinders through a regulator shall be constructed with a factor of safety of at least five based on the maximum setting of the pressure regulator or based on the start-to-discharge pressure of the relief valve, whichever is the greater."

Pump-down capacity is also covered for the first time in this manner:

"A pressure vessel designed to receive the refrigerant charge during a pump-down of a self-contained refrigeration system shall have sufficient capacity to receive the charge without the liquid occupying more than 90% of the volume of the vessel when the temperature of the refrigerant is 90° F."

Test conditions for beverage dispensers, commercial cabinets, and oxygen therapeutic apparatus have been added as follows:

"Beverage dispensers, etc., with impounded water.—Devices of this type to be tested the same as bottle-

type water coolers. No water to be drawn during the test."

[Test conditions for bottle-type water coolers are given as follows: "Test ambient 104° F. (40° C.). Temperature of water at time of filling, 80° F. Unit to remain inoperative in test ambient for 18 hours with water bottle filled. To be started in operation and run continuously until constant temperature and pressure conditions are reached. During the test, water to be drawn at the rate of 1-gal. per hour."]

"Commercial cabinets, i.e., display cases, reach-in cabinets, etc.—These devices to be tested the same as household refrigerating machines."

[UL test conditions for household machines (and freezers) are: "Test ambient 104° F. (40° C.). No load in food or freezer compartment. Unit to remain inoperative in test ambient with cabinet door open until device reaches ambient temperature. To be started in operation with door closed and run continuously until constant temperature conditions are reached on electrical parts. High and low side pressure are to be recorded for determination of pressure vessel strength."]

"Oxygen-therapeutic apparatus (oxygen tents).—Test ambient 104° F. (40° C.). Condenser air inlet, 104° F. dry bulb and 80° wet bulb. Unit, while connected to tent, to be operated continuously in test ambient until constant temperature and pressure conditions are reached."

Conditions for room cooler tests have changed to read:

"Room coolers, air cooled.—Test ambient 104° F. (40° C.). Condenser air inlet, 104° F. dry bulb and 80° F. wet bulb. Evaporator air inlet, 104° F. dry bulb and 80° F. wet bulb. Unit to remain inoperative in test

ambient until the device reaches ambient temperature. To be started in operation and run continuously until constant temperature and pressure conditions are reached."

New sections cover temperature measurement and test voltage:

"Except for coils, temperature readings are to be obtained by means of thermometers or thermocouples, preferably the latter; and a temperature shall be considered to be constant when three successive readings, taken at five-minute intervals, indicate no change. If thermocouples are used, they are to be applied at points accessible to mercury thermometers. The temperature of a coil may be determined by the resistance method or the thermocouple method, except that if results by the latter method are in doubt (i.e., if temperature values are within 5° C. of the maximum allowable temperature for the coil) the resistance method shall be employed as a check if the nature of the coil is such that this method is feasible—in which case observed temperature values may be 20° C. higher than those indicated in the table under 'temperature.'"

"The test voltage should not be less than 100% nor more than 105% of the rated voltage of the device except that a high voltage may be employed if agreeable to those concerned."

"Static loading test" on window-type room coolers has been increased from 200 lbs. to 400 lbs.:

"Window-type room coolers installed in a simulated window frame in accordance with manufacturer's instructions shall withstand a static load of 400 lbs. without failure of the supporting means. The load shall be distributed along the outer edge of the device."

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